

=> fil reg; d stat que 124; d que nos 129
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STRUCTURE FILE UPDATES: 26 AUG 2008 HIGHEST RN 1043895-06-2
 DICTIONARY FILE UPDATES: 26 AUG 2008 HIGHEST RN 1043895-06-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

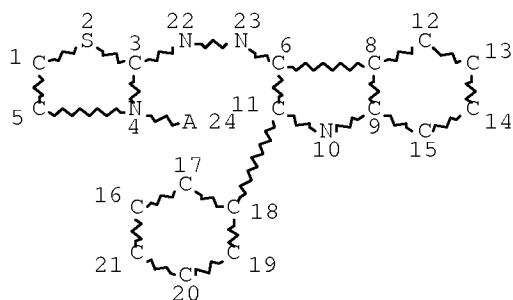
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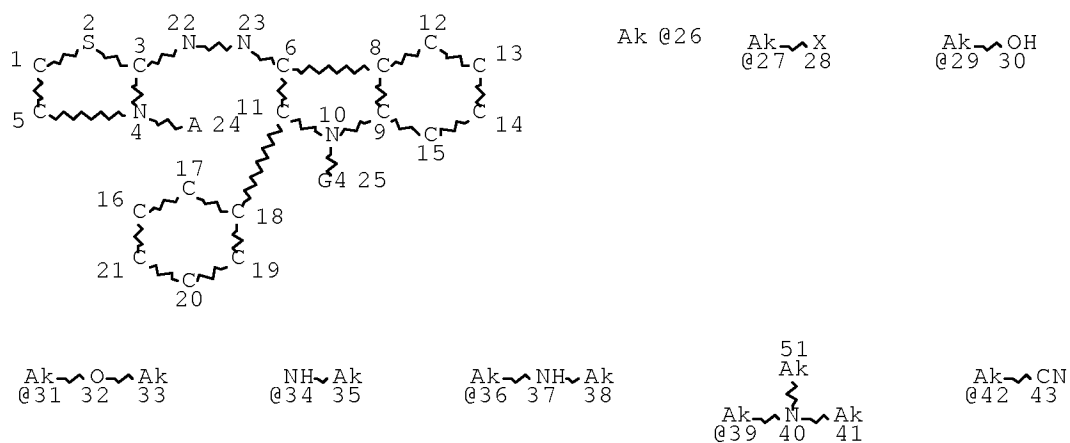
L9 STR



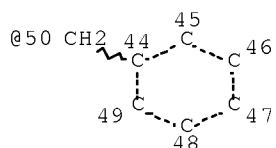
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 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE
 L16 278 SEA FILE=REGISTRY SSS FUL L9
 L21 STR



Page 1-A



Page 2-A

VAR G4=H/26/27/29/31/34/36/39/42/CY/50

NODE ATTRIBUTES:

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:

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NUMBER OF NODES IS   50

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STEREO ATTRIBUTES: NONE

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100.0% PROCESSED 278 ITERATIONS

202 ANSWERS

SEARCH TIME: 00.00.01

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L18         1 SEA FILE=REGISTRY ABB=ON 42373-04-6 THIS RN TEMPORARILY REMOVED
           FROM THE ANSWER SET BECAUSE IT PRODUCED MANY REFERENCES
L21         STR
L24         202 SEA FILE=REGISTRY SUB=L16 SSS FUL L21
L29         201 SEA FILE=REGISTRY ABB=ON L24 NOT L18

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FILE 'CAPLUS' ENTERED AT 11:57:14 ON 27 AUG 2008
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COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)
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FILE COVERS 1907 - 27 Aug 2008 VOL 149 ISS 9
FILE LAST UPDATED: 26 Aug 2008 (20080826/ED)
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Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

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L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6
L21 STR
L24 202 SEA FILE=REGISTRY SUB=L16 SSS FUL L21
L29 201 SEA FILE=REGISTRY ABB=ON L24 NOT L18
L31 48 SEA FILE=CAPLUS ABB=ON L29
L40 52378 SEA FILE=CAPLUS ABB=ON HAIR/OBI
L41 8184 SEA FILE=CAPLUS ABB=ON KERATIN/OBI
L43 146292 SEA FILE=CAPLUS ABB=ON 62/SC,SX
L47 136522 SEA FILE=CAPLUS ABB=ON DYE#/CW
L50 64030 SEA FILE=CAPLUS ABB=ON 41/SC,SX
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L47 OR L50))
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L32 74 SEA FILE=CAPLUS ABB=ON L18
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L54 48 L53 OR (L53 AND L32)
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6328356 PATENT/DT
L55 43 L54 AND PATENT/DT
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 2177379 REVIEW/DT
 L56 0 L54 AND REVIEW/DT

=> s 154 not 155
 L57 5 L54 NOT L55

=> s 157 and py<2005
 25112884 PY<2005
 L58 5 L57 AND PY<2005

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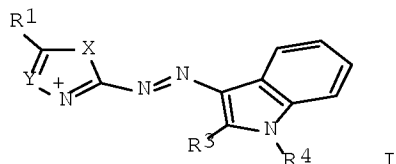
=> s 158,159
 L60 47 (L58 OR L59)

=> d ibib abs hitind hitstr 160 1-47

L60 ANSWER 1 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:116908 CAPLUS Full-text
 DOCUMENT NUMBER: 144:198108
 TITLE: Cationic azo compounds as direct dyes for the coloring
 of keratin fibers
 INVENTOR(S): Knuebel, Georg; Hoeffkes, Horst; Giesa, Helmut
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
 SOURCE: PCT Int. Appl., 68 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006013036	A1	20060209	WO 2005-EP8085	20050726 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM DE 102004036688 A1 20060323 DE 2004-102004036688 20040728 <-- EP 1771150 A1 20070411 EP 2005-773921 20050726 <-- R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR PRIORITY APPLN. INFO.: DE 2004-102004036688A 20040728 <-- WO 2005-EP8085 W 20050726				

OTHER SOURCE(S): MARPAT 144:198108
GI



- AB The invention relates to cationic azo compds. of general formula (I), where X = O, S, Y = N, CR5, R1 = for example, H, R3 = for example, C6-12 aryl, C7-13 aralkyl or C7-13 alkaryl and R2, R4, R5 = for example, H, used as direct dyes for coloring human hair. Thus a composition contained (weight/weight%): Texapon NSO 15.0; Lorol 5.0; Polychol 5 1.2; DC 345 EU 0.1; Mirapol A15 0.4; Lipoxol 400 MED 5.0; Luviskol K30 0.5; sodium bicarbonate 0.5; Nutrilan Keratin W 0.3; 3-methyl-2-[(E)-(1-methyl-2-phenyl-1H-indole-3-yl)diazany-1,3-thiazole-3-ium] chloride 0.15; Violet 1,4 D 0.15; HC Yellow 5 0.15; HC Blue 2 0.40; Rodol 9R Base 0.05; 6-nitro-1,2,3,4-tetrahydroquinoxaline 0.05; Basid Red 76 0.04; Basic Brown 16 0.04; Basic Blue 7 0.02; perfume 0.20; corn starch to 100.
- IC ICM A61K008-49
ICS A61Q005-10
- CC 62-3 (Essential Oils and Cosmetics)
- ST direct hair dye cationic azo compd
- IT Human
(cationic azo compds. as direct dyes for coloring of keratin fibers)
- IT Azo dyes
(cationic; cationic azo compds. as direct dyes for coloring of keratin fibers)
- IT Dyes
(direct; cationic azo compds. as direct dyes for coloring of keratin fibers)
- IT Hair preparations
(dyes; cationic azo compds. as direct dyes for coloring of keratin fibers)
- IT Hydrazones
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(heterocyclic derivs.; cationic azo compds. as direct dyes for coloring of keratin fibers)
- IT 108-45-2D, m-Phenylene diamine, derivs. 108-46-3D, Resorcin, derivs. 591-27-5D, m-Aminophenol, derivs. 632-99-5, Basic Violet 14 633-96-5, Acid Orange 7 1004-74-6D, Tetraaminopyrimidine, derivs. 1064-48-8, Acid Black 1 1321-67-1D, Naphthol, derivs. 2390-60-5, Basic Blue 7 2784-89-6, HC Red 1 2871-01-4, HC Red 3 3520-42-1, Acid Red 52 3567-66-6, Acid Red 33 4430-18-6, Acid Violet 43 4926-55-0, HC Yellow 2 5678-05-7D, 4-Aminopyrazolone, derivs. 6358-09-4, Rodol 9R Base 12270-25-6, Basic Red 51 26381-41-9, Basic Brown 16 33229-34-4, HC Blue 2 38096-29-6D, Diaminopyridine, derivs. 39455-90-8D, Pyrazolone, derivs. 54381-08-7, HC Orange 1 56932-44-6, HC Yellow 5 61901-61-9, Basic Orange 31 65235-31-6 68123-13-7, Basic Blue 99 68391-30-0, Basic Red 76 68391-31-1, Basic Yellow 57 92952-81-3, HC Red BN 116844-55-4, Basic Yellow 87 174254-70-7, Violet 1.4D 176742-32-8, Basic Brown 17 874886-35-8

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(cationic azo compds. as direct dyes for coloring of keratin
fibers)

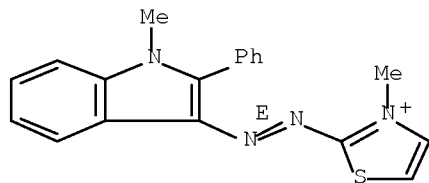
IT 874886-35-8

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(cationic azo compds. as direct dyes for coloring of keratin
fibers)

RN 874886-35-8 CAPLUS

CN Thiazolium, 3-methyl-2-[(1E)-2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-
, chloride (1:1) (CA INDEX NAME)

Double bond geometry as shown.



● Cl⁻

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 2 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:962347 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:249724

TITLE: Lightening colorant containing indolyl thiazolium azo
dyes

INVENTOR(S): Pasquier, Cecile; Buclin, Veronique; Duc-Reichlin,
Nadia; Kiener, Caroline; Braun, Hans-Juergen

PATENT ASSIGNEE(S): Wella Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005080507	A1	20050901	WO 2004-EP13706	20041202 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 102004008606	A1	20050908	DE 2004-102004008606	20040221 <--
EP 1730239	A1	20061213	EP 2004-803448	20041202 <--

EP 1730239 B1 20070502
 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

AT 361344	T	20070515	AT 2004-803448	20041202	<--
BR 2004018559	A	20070619	BR 2004-18559	20041202	<--
JP 2007523103	T	20070816	JP 2006-553456	20041202	<--
ES 2286703	T3	20071201	ES 2004-803448	20041202	<--
US 20070180631	A1	20070809	US 2006-588934	20060809	<--

PRIORITY APPLN. INFO.: DE 2004-102004008606A 20040221 <--
 WO 2004-EP13706 W 20041202

OTHER SOURCE(S): MARPAT 143:249724

AB A hair dye composition for simultaneous dyeing and lightening keratin fibers comprises an oxidizing agent and a indolyl thiazolium azo dye at pH 8 - 11. A typical composition contains 5 g of a dye and 5 g of 9% H2O2 with an. aqueous NH3 for preparation of basic pH.

IC ICM C09B044-20

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 62

ST hair dye compn simultaneous dyeing lightening keratin fiber; dye hair compn indolyl thiazolium azo oxidizing agent

IT Hair preparations
 (bleaches; hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

IT Hair preparations
 (dyes, oxidative; hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

IT Oxidizing agents
 (hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

IT Fibers
 RL: MSC (Miscellaneous)
 (keratin; hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

IT 25442-24-4 862998-76-3 862998-80-9
 862998-84-3 862998-92-3 863494-62-6 863494-64-8
 863494-66-0 863494-68-2
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

IT 7722-84-1, Hydrogen peroxide (H2O2), processes
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (oxidizing agent; hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

IT 25442-24-4 862998-76-3 862998-80-9
 862998-84-3 862998-92-3
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (hair dye composition for simultaneous dyeing and lightening keratin fibers comprising an oxidizing agent and an indolyl thiazolium azo dye)

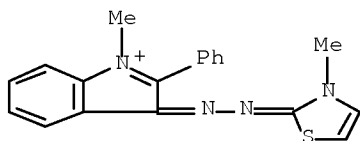
RN 25442-24-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

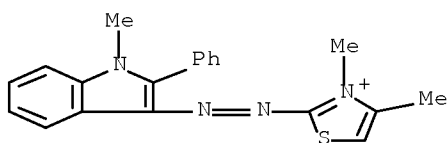
RN 862998-76-3 CAPLUS

CN Thiazolium, 3,4-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-75-2

CMF C20 H19 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

RN 862998-80-9 CAPLUS

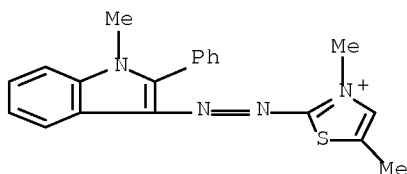
CN Thiazolium, 3,5-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,

methyl sulfate (1:1) (CA INDEX NAME)

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CRN 862998-79-6

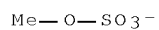
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CMF C H3 O4 S



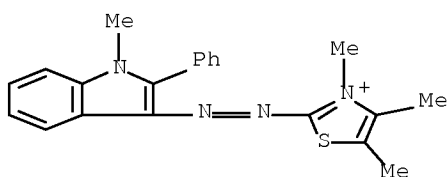
RN 862998-84-3 CAPLUS

CN Thiazolium, 3,4,5-trimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-83-2

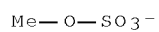
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CM 2

CRN 21228-90-0

CMF C H3 O4 S



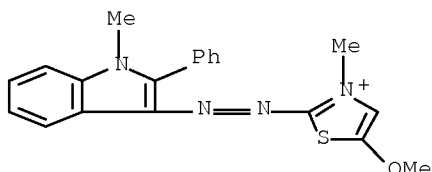
RN 862998-92-3 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-91-2

CMF C20 H19 N4 O S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 3 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:961999 CAPLUS Full-text

DOCUMENT NUMBER: 143:253455

TITLE: Direct hair dyes containing indolylthiazolium azo dyes

INVENTOR(S): Pasquier, Cecile; Buclin, Veronique; Duc-Reichlin, Nadia; Kiener, Caroline; Braun, Hans-Juergen

PATENT ASSIGNEE(S): Wella Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

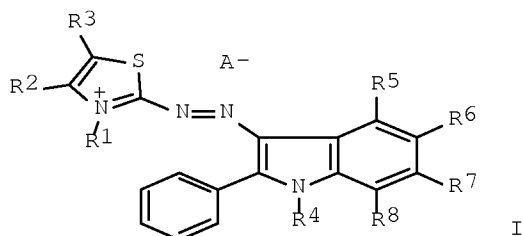
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005079734	A1	20050901	WO 2004-EP13401	20041126 <--
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RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,			

SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG

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EP 1716209	A1	20061102	EP 2004-803283	20041126 <--
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BR 2004018388	A	20070522	BR 2004-18388	20041126 <--
JP 2007523102	T	20070816	JP 2006-553455	20041126 <--
PRIORITY APPLN. INFO.:			DE 2004-102004008607A	20040221 <--
			WO 2004-EP13401	W 20041126

OTHER SOURCE(S): MARPAT 143:253455
 GI



AB The invention relates to agents for coloring keratin fibers, containing at least one indolyl thiazolium azo dye of general formula (I); R1-R8 are defined. Addnl. direct dyes, oxidative dyes, synthetic polymers, natural polymers and modified natural polymers can be added. Thus a direct hair dye contained 2.5 mmol 3-Methyl-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]thiazolium monomethyl sulfate and (g): ethanol 12.5; cetylmethylammonium chloride 10.0; water to 100.0.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST direct hair dye indolylthiazolium azo deriv

IT Oxidizing agents

pH

(direct hair dyes containing indolylthiazolium azo dyes)

IT Polymers, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(direct hair dyes containing indolylthiazolium azo dyes)

IT Dyes

(direct; direct hair dyes containing indolylthiazolium azo dyes)

IT Hair preparations

(dyes, oxidative; direct hair dyes containing indolylthiazolium azo dyes)

IT Hair preparations

(dyes; direct hair dyes containing indolylthiazolium azo dyes)

IT Azo dyes

(indolylthiazolium; direct hair dyes containing indolylthiazolium azo dyes)

IT 42373-04-6 862998-71-8 862998-72-9
 862998-73-0 862998-74-1 862998-76-3
 862998-77-4 862998-78-5 862998-80-9
 862998-81-0 862998-82-1 862998-84-3
 862998-85-4 862998-86-5 862998-88-7

862998-89-8 862998-90-1 862998-92-3
 862998-93-4 862998-94-5 862998-95-6
 862998-96-7 862998-97-8 862998-99-0
 862999-00-6 862999-01-7 862999-03-9
 862999-04-0 862999-05-1 862999-07-3
 862999-08-4 862999-09-5 862999-11-9
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 862999-16-4 862999-17-5 862999-19-7
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 862999-24-4 862999-25-5 862999-27-7
 862999-28-8 862999-29-9 862999-31-3
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 862999-36-8 862999-37-9 862999-39-1

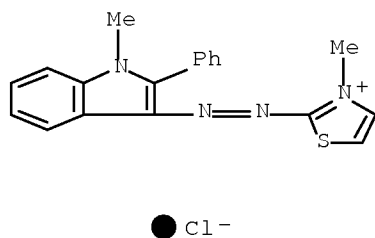
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (direct hair dyes containing indolylthiazolium azo dyes)

IT 42373-04-6 862998-71-8 862998-72-9
 862998-73-0 862998-74-1 862998-76-3
 862998-77-4 862998-78-5 862998-80-9
 862998-81-0 862998-82-1 862998-84-3
 862998-85-4 862998-86-5 862998-88-7
 862998-89-8 862998-90-1 862998-92-3
 862998-93-4 862998-94-5 862998-95-6
 862998-96-7 862998-97-8 862998-99-0
 862999-00-6 862999-01-7 862999-03-9
 862999-04-0 862999-05-1 862999-07-3
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 862999-24-4 862999-25-5 862999-27-7
 862999-28-8 862999-29-9 862999-31-3
 862999-32-4 862999-33-5 862999-35-7
 862999-36-8 862999-37-9 862999-39-1

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (direct hair dyes containing indolylthiazolium azo dyes)

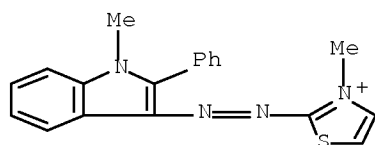
RN 42373-04-6 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
 chloride (1:1) (CA INDEX NAME)



RN 862998-71-8 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
 bromide (1:1) (CA INDEX NAME)



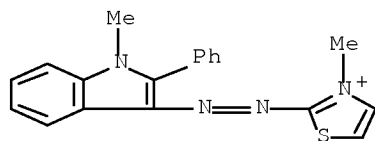
RN 862998-72-9 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 761340-85-6

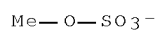
CMF C19 H17 N4 S



CM 2

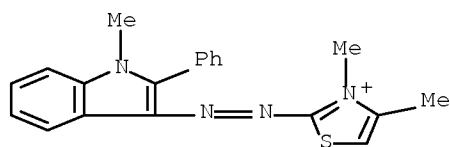
CRN 21228-90-0

CMF C H3 O4 S



RN 862998-73-0 CAPLUS

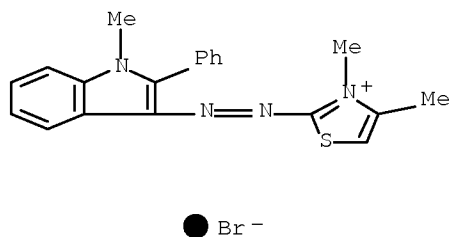
CN Thiazolium, 3,4-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)



RN 862998-74-1 CAPLUS

CN Thiazolium, 3,4-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)

bromide (1:1) (CA INDEX NAME)



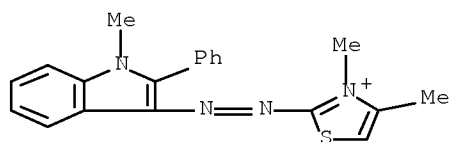
RN 862998-76-3 CAPLUS

CN Thiazolium, 3,4-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-75-2

CMF C20 H19 N4 S



CM 2

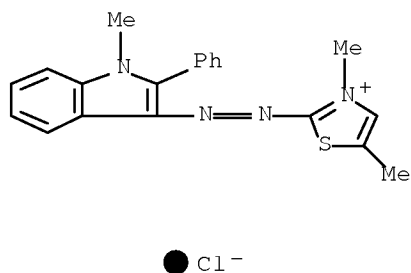
CRN 21228-90-0

CMF C H3 O4 S

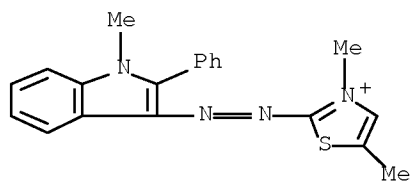
Me—O—SO₃⁻

RN 862998-77-4 CAPLUS

CN Thiazolium, 3,5-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)



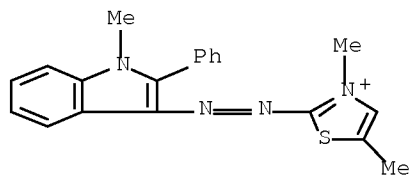
RN 862998-78-5 CAPLUS
 CN Thiazolium, 3,5-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
 bromide (1:1) (CA INDEX NAME)



RN 862998-80-9 CAPLUS
 CN Thiazolium, 3,5-dimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
 methyl sulfate (1:1) (CA INDEX NAME)

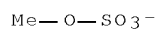
CM 1

CRN 862998-79-6
 CMF C20 H19 N4 S

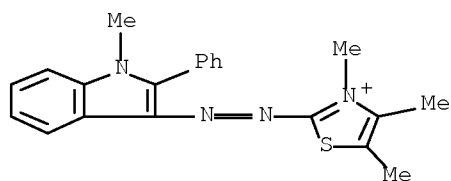


CM 2

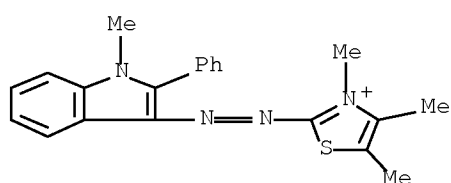
CRN 21228-90-0
 CMF C H3 O4 S



RN 862998-81-0 CAPLUS
 CN Thiazolium, 3,4,5-trimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)



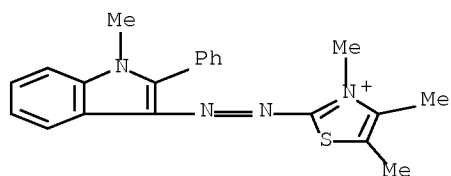
RN 862998-82-1 CAPLUS
 CN Thiazolium, 3,4,5-trimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, bromide (1:1) (CA INDEX NAME)



RN 862998-84-3 CAPLUS
 CN Thiazolium, 3,4,5-trimethyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

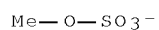
CM 1

CRN 862998-83-2
 CMF C21 H21 N4 S

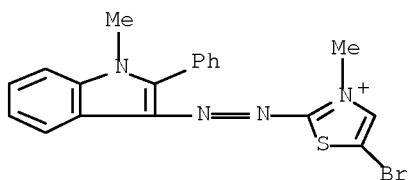


CM 2

CRN 21228-90-0
 CMF C H3 O4 S

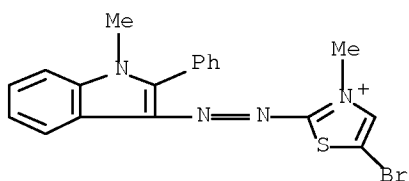


RN 862998-85-4 CAPLUS
 CN Thiazolium, 5-bromo-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

RN 862998-86-5 CAPLUS
 CN Thiazolium, 5-bromo-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, bromide (1:1) (CA INDEX NAME)

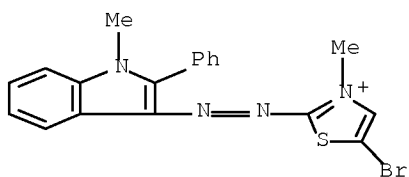


● Br⁻

RN 862998-88-7 CAPLUS
 CN Thiazolium, 5-bromo-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-87-6
 CMF C19 H16 Br N4 S



CM 2

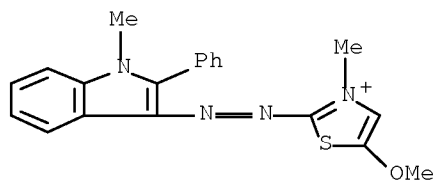
CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

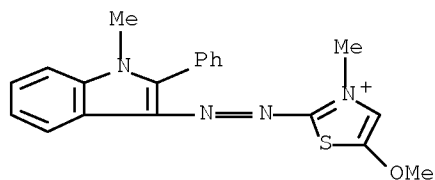
RN 862998-89-8 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)

● Cl⁻

RN 862998-90-1 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, bromide (1:1) (CA INDEX NAME)

● Br⁻

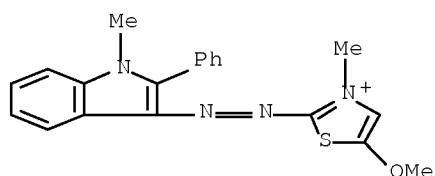
RN 862998-92-3 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-91-2

CMF C20 H19 N4 O S



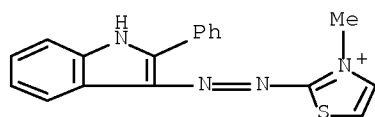
CM 2

CRN 21228-90-0

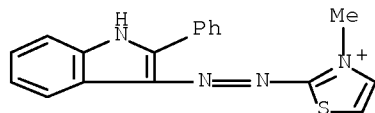
CMF C H3 O4 S

Me—O—SO₃⁻

RN 862998-93-4 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, chloride
(1:1) (CA INDEX NAME)● Cl⁻

RN 862998-94-5 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, bromide
(1:1) (CA INDEX NAME)● Br⁻

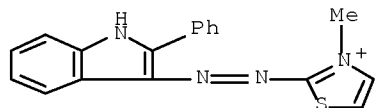
RN 862998-95-6 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 97090-47-6

CMF C18 H15 N4 S



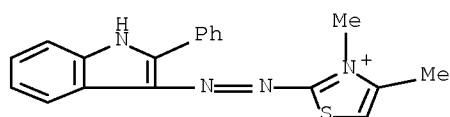
CM 2

CRN 21228-90-0

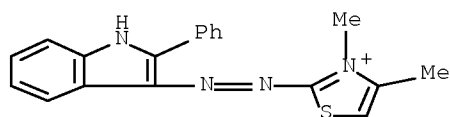
CMF C H3 O4 S

Me—O—SO₃⁻

RN 862998-96-7 CAPLUS

CN Thiazolium, 3,4-dimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, chloride
(1:1) (CA INDEX NAME)● Cl⁻

RN 862998-97-8 CAPLUS

CN Thiazolium, 3,4-dimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, bromide
(1:1) (CA INDEX NAME)● Br⁻

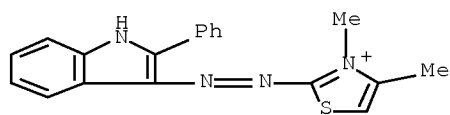
RN 862998-99-0 CAPLUS

CN Thiazolium, 3,4-dimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862998-98-9

CMF C19 H17 N4 S



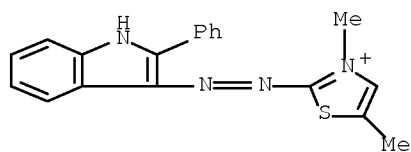
CM 2

CRN 21228-90-0

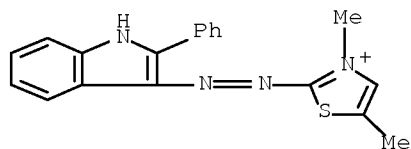
CMF C H3 O4 S

Me—O—SO₃⁻

RN 862999-00-6 CAPLUS

CN Thiazolium, 3,5-dimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, chloride
(1:1) (CA INDEX NAME)● Cl⁻

RN 862999-01-7 CAPLUS

CN Thiazolium, 3,5-dimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, bromide
(1:1) (CA INDEX NAME)● Br⁻

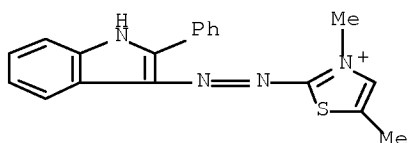
RN 862999-03-9 CAPLUS

CN Thiazolium, 3,5-dimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-02-8

CMF C19 H17 N4 S



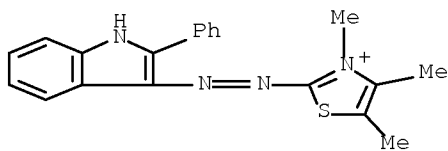
CM 2

CRN 21228-90-0

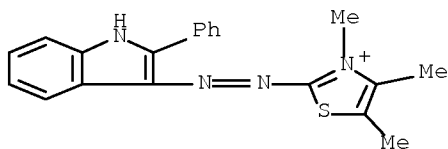
CMF C H3 O4 S

Me—O—SO₃⁻

RN 862999-04-0 CAPLUS

CN Thiazolium, 3,4,5-trimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-,
chloride (1:1) (CA INDEX NAME)● Cl⁻

RN 862999-05-1 CAPLUS

CN Thiazolium, 3,4,5-trimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-,
bromide (1:1) (CA INDEX NAME)● Br⁻

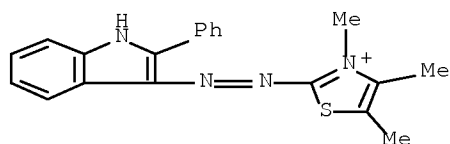
RN 862999-07-3 CAPLUS

CN Thiazolium, 3,4,5-trimethyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-,
methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-06-2

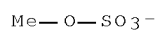
CMF C20 H19 N4 S



CM 2

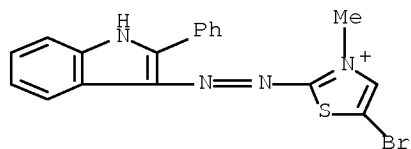
CRN 21228-90-0

CMF C H3 O4 S



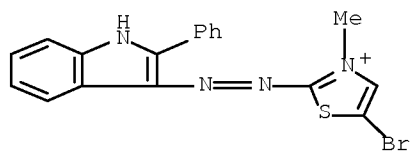
RN 862999-08-4 CAPLUS

CN Thiazolium, 5-bromo-3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)



RN 862999-09-5 CAPLUS

CN Thiazolium, 5-bromo-3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, bromide (1:1) (CA INDEX NAME)



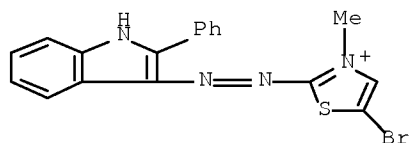
RN 862999-11-9 CAPLUS

CN Thiazolium, 5-bromo-3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-10-8

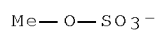
CMF C18 H14 Br N4 S



CM 2

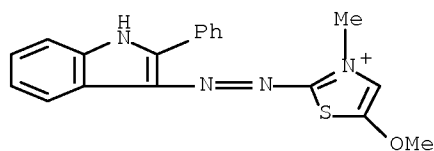
CRN 21228-90-0

CMF C H3 O4 S



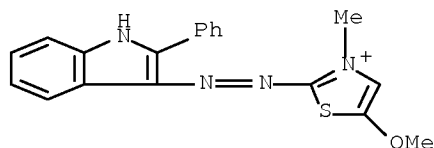
RN 862999-12-0 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)



RN 862999-13-1 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, bromide (1:1) (CA INDEX NAME)



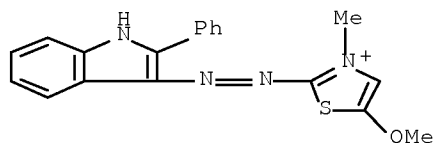
RN 862999-15-3 CAPLUS

CN Thiazolium, 5-methoxy-3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-14-2

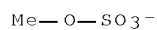
CMF C19 H17 N4 O S



CM 2

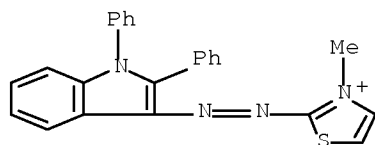
CRN 21228-90-0

CMF C H3 O4 S



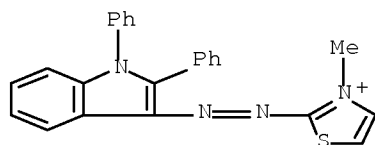
RN 862999-16-4 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3-methyl-, chloride (1:1) (CA INDEX NAME)



RN 862999-17-5 CAPLUS

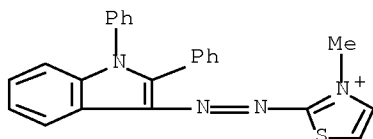
CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3-methyl-, bromide (1:1) (CA INDEX NAME)



RN 862999-19-7 CAPLUS
 CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3-methyl-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-18-6
 CMF C24 H19 N4 S

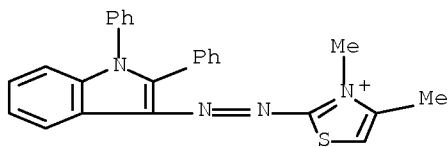


CM 2

CRN 21228-90-0
 CMF C H3 O4 S

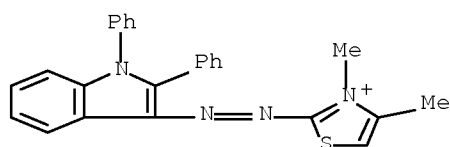
Me—O—SO₃⁻

RN 862999-20-0 CAPLUS
 CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,4-dimethyl-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

RN 862999-21-1 CAPLUS
 CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,4-dimethyl-, bromide (1:1) (CA INDEX NAME)



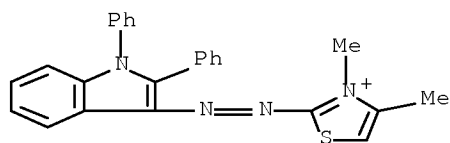
RN 862999-23-3 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,4-dimethyl-,
methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-22-2

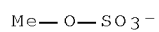
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CM 2

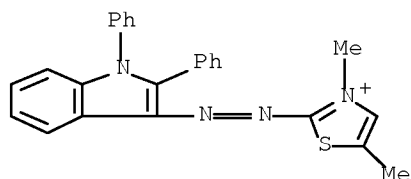
CRN 21228-90-0

CMF C H3 O4 S



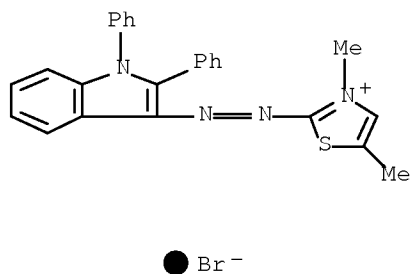
RN 862999-24-4 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,5-dimethyl-,
chloride (1:1) (CA INDEX NAME)



RN 862999-25-5 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,5-dimethyl-,
bromide (1:1) (CA INDEX NAME)



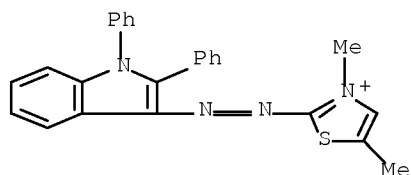
RN 862999-27-7 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,5-dimethyl-,
methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-26-6

CMF C25 H21 N4 S



CM 2

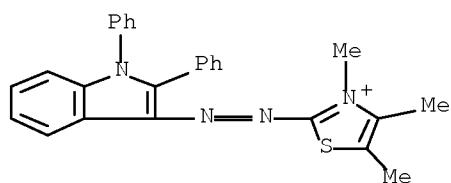
CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

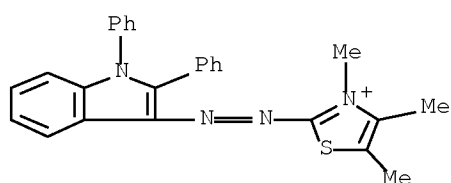
RN 862999-28-8 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,4,5-trimethyl-,
chloride (1:1) (CA INDEX NAME)



RN 862999-29-9 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,4,5-trimethyl-,
bromide (1:1) (CA INDEX NAME)



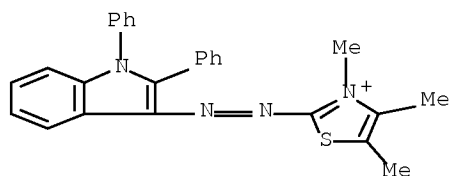
RN 862999-31-3 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3,4,5-trimethyl-,
methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-30-2

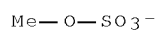
CMF C26 H23 N4 S



CM 2

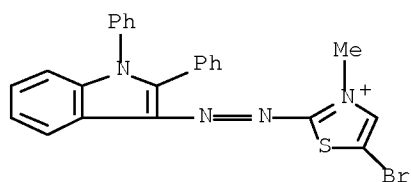
CRN 21228-90-0

CMF C H3 O4 S



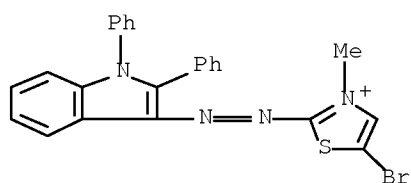
RN 862999-32-4 CAPLUS

CN Thiazolium, 5-bromo-2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3-methyl-, chloride (1:1) (CA INDEX NAME)



RN 862999-33-5 CAPLUS

CN Thiazolium, 5-bromo-2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3-methyl-, bromide (1:1) (CA INDEX NAME)



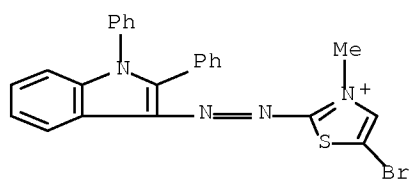
RN 862999-35-7 CAPLUS

CN Thiazolium, 5-bromo-2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-3-methyl-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-34-6

CMF C24 H18 Br N4 S



CM 2

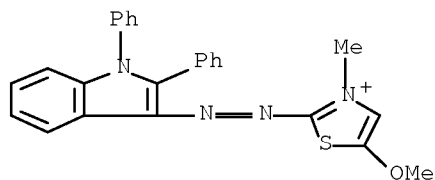
CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

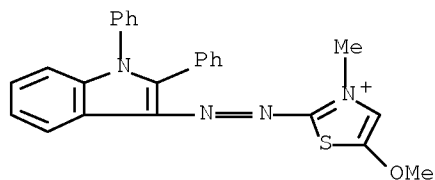
RN 862999-36-8 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-5-methoxy-3-methyl-, chloride (1:1) (CA INDEX NAME)

● Cl⁻

RN 862999-37-9 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-5-methoxy-3-methyl-, bromide (1:1) (CA INDEX NAME)

● Br⁻

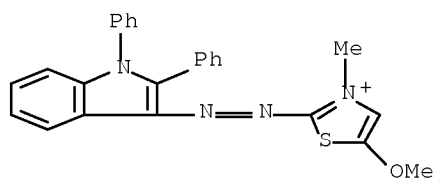
RN 862999-39-1 CAPLUS

CN Thiazolium, 2-[2-(1,2-diphenyl-1H-indol-3-yl)diazenyl]-5-methoxy-3-methyl-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 862999-38-0

CMF C25 H21 N4 O S



CM 2

CRN 21228-90-0
CMF C H3 O4 SMe—O—SO₃⁻

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 4 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2002:849954 CAPLUS Full-text
 DOCUMENT NUMBER: 137:360370
 TITLE: Optical data storage medium containing a diaza
 hemicyanine dye as the light-absorbing compound in the
 information layer and optical disk manufacture
 INVENTOR(S): Berneth, Horst; Bruder, Friedrich-Karl; Haese,
 Wilfried; Hagen, Rainer; Hassenrueck, Karin;
 Kostromine, Serguei; Landenberger, Peter; Oser,
 Rafael; Sommermann, Thomas; Stawitz, Josef-Walter;
 Bieringer, Thomas
 PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 49 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 15
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002089128	A1	20021107	WO 2002-EP3086	20020320 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10115227	A1	20021219	DE 2001-10115227	20010328 <--
DE 10136064	A1	20030213	DE 2001-10136064	20010725 <--
AU 2002257686	A1	20021015	AU 2002-257686	20020320 <--
US 20020155381	A1	20021024	US 2002-102586	20020320 <--
WO 2002086878	A2	20021031	WO 2002-EP3071	20020320 <--
WO 2002086878	A3	20030227		
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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,			

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 AU 2002312766 A1 20021105 AU 2002-312766 20020320 <--
 AU 2002257685 A1 20021111 AU 2002-257685 20020320 <--
 US 20030071268 A1 20030417 US 2002-102578 20020320 <--
 US 6726972 B2 20040427
 EP 1377975 A2 20040107 EP 2002-727443 20020320 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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 EP 1377978 A2 20040107 EP 2002-737887 20020320 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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 EP 1386318 A1 20040204 EP 2002-727442 20020320 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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 CN 1513172 A 20040714 CN 2002-810888 20020320 <--
 CN 1515002 A 20040721 CN 2002-810906 20020320 <--
 JP 2004524198 T 20040812 JP 2002-584311 20020320 <--
 JP 2004524201 T 20040812 JP 2002-586340 20020320 <--
 JP 2004534344 T 20041111 JP 2002-578290 20020320 <--
 TW 226629 B 20050111 TW 2002-91105384 20020320 <--
 CN 1659640 A 20050824 CN 2002-810520 20020320 <--
 TW 256634 B 20060611 TW 2002-91105376 20020320 <--
 AU 2002358471 A1 20030414 AU 2002-358471 20020927 <--
 EP 1435094 A2 20040707 EP 2002-792715 20020927 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
 JP 2005505092 T 20050217 JP 2003-533274 20020927 <--
 IN 2003MN00868 A 20050429 IN 2003-MN868 20030912 <--
 IN 2003MN00869 A 20050429 IN 2003-MN869 20030912 <--
 IN 2003MN00901 A 20050429 IN 2003-MN901 20030923 <--
 IN 2004DN00784 A 20060721 IN 2004-DN784 20040326 <--
 US 20040257973 A1 20041223 US 2004-491755 20040813 <--
 US 20050042407 A1 20050224 US 2004-953235 20040929 <--
 US 7041354 B2 20060509

PRIORITY APPLN. INFO.:

DE 2001-10115227 A 20010328 <--
 DE 2001-10136064 A 20010725 <--
 EP 2001-130527 A 20011221 <--
 EP 2002-3812 A 20020220 <--
 DE 2001-10117461 A 20010406 <--
 DE 2001-10117462 A 20010406 <--
 DE 2001-10117463 A 20010406 <--
 DE 2001-10117464 A 20010406 <--
 DE 2001-10124585 A 20010521 <--
 DE 2001-10136063 A 20010725 <--
 DE 2001-10140165 A 20010822 <--
 EP 2001-123810 A 20011004 <--
 DE 2002-10200484 A 20020109 <--
 DE 2002-10202571 A 20020124 <--
 EP 2002-5505 A 20020311 <--
 US 2002-101793 A3 20020320 <--
 WO 2002-EP3071 W 20020320 <--
 WO 2002-EP3086 W 20020320 <--
 WO 2002-EP3094 W 20020320 <--
 WO 2002-EP10900 W 20020927 <--

OTHER SOURCE(S): MARPAT 137:360370

AB An optical data storage medium containing a preferably transparent substrate
 which has optionally already been coated with one or more reflecting layers
 has applied onto the surface a photorecordable information layer, optionally
 one or more reflecting layers, and optionally a protective layer or an addnl.

substrate or a top layer. The data storage medium can be recorded on and read using blue or red light, preferably laser light,. The information layer contains at least one diaza hemicyanine dye as light-absorbing compound and optionally a binder.

IC ICM G11B007-24
ICS C09B029-033; C09B029-36; C09B023-16; C09B044-10; C09B044-18;
C09B044-20

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 41

IT Dyes
(diaza hemicyanine; diaza hemicyanine dye as light-absorbing compound in
information layer of optical data storage medium)

IT 7267-43-8P 474778-13-7P 474778-14-8P 474778-15-9P 474778-17-1P
474778-19-3P 474778-21-7P 474778-23-9P 474778-24-0P 474778-25-1P
474778-26-2P 474778-28-4P 474778-29-5P 474778-31-9P 474778-33-1P
474778-35-3P 474778-37-5P 474778-38-6P 474778-40-0P 474778-41-1P
474778-43-3P 474778-44-4P 474778-46-6P 474778-48-8P 474778-50-2P
474778-51-3P 474778-52-4P 474778-53-5P 474778-54-6P 474778-56-8P
474778-58-0P 474778-59-1P 474778-61-5P 474778-62-6P
474778-64-8P 474778-65-9P 474778-66-0P 474778-68-2P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
preparation); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(diaza hemicyanine dye as light-absorbing compound in information layer
of optical data storage medium)

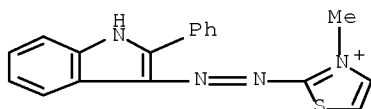
IT 474778-59-1P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
preparation); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(diaza hemicyanine dye as light-absorbing compound in information layer
of optical data storage medium)

RN 474778-59-1 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(2-phenyl-1H-indol-3-yl)diazenyl]-, perchlorate
(1:1) (CA INDEX NAME)

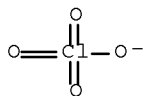
CM 1

CRN 97090-47-6
CMF C18 H15 N4 S



CM 2

CRN 14797-73-0
CMF C1 O4

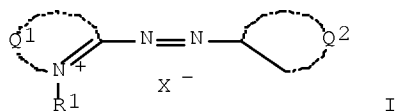


REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 5 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:78358 CAPLUS Full-text
 DOCUMENT NUMBER: 130:202988
 TITLE: Lightfast optical recording medium including cationic
 azo dye and showing low jitter
 INVENTOR(S): Shinkai, Masahiro; Kobe, Emiko
 PATENT ASSIGNEE(S): TDK Electronics Co., Ltd., Japan; Tdk Corporation
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11028865	A	19990202	JP 1997-199257	19970709 <--
JP 3724530	B2	20051207		
PRIORITY APPLN. INFO.:			JP 1997-199257	19970709 <--

GI



AB The recording medium comprises a recording layer containing an azo dye I (Q1 = 5- or 6-membered aromatic azacycle; Q2 = aromatic ring; R1 = alkyl; X- = counter anion) whose birefringence at 635 nm has a real part (n) 2.0-2.8 and imaginary part (k) ≤0.4.

IC ICM B41M005-26
 ICS C09B056-02; G11B007-24; C07D213-76; C07D233-88; C07D277-50;
 C07D417-12

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 41

IT Azo dyes
 Optical disks
 (lightfast optical recording medium including cationic azo dye and showing low jitter)

IT 72971-34-7 79203-15-9 220368-64-9 220368-66-1 220368-68-3
 220368-69-4 220368-70-7 220368-72-9 220368-74-1
 220368-75-2 220368-77-4 220368-78-5 220368-80-9 220368-81-0
 220368-83-2 220736-70-9 220736-72-1 220736-74-3
 220736-75-4 220736-77-6 220736-79-8 220736-81-2

220736-83-4 220736-85-6 220736-92-5

RL: DEV (Device component use); USES (Uses)

(lightfast optical recording medium including cationic azo dye and showing low jitter)

IT 220368-69-4 220368-70-7 220736-74-3
220736-75-4

RL: DEV (Device component use); USES (Uses)

(lightfast optical recording medium including cationic azo dye and showing low jitter)

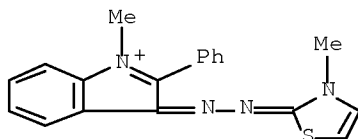
RN 220368-69-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[2-(3-methyl-2(3H)-thiazolylidene)hydrazinylidene]-2-phenyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 47340-09-0

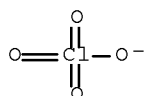
CMF C19 H17 N4 S



CM 2

CRN 14797-73-0

CMF C1 O4



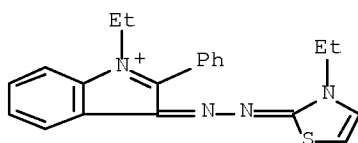
RN 220368-70-7 CAPLUS

CN 3H-Indolium, 1-ethyl-3-[2-(3-ethyl-2(3H)-thiazolylidene)hydrazinylidene]-2-phenyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 65212-90-0

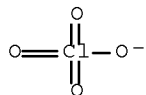
CMF C21 H21 N4 S



CM 2

CRN 14797-73-0

CMF Cl O4



RN 220736-74-3 CAPLUS

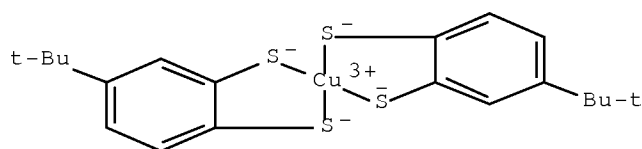
CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, bis[4-(1,1-dimethylethyl)-1,2-benzenedithiolato(2-)-κS,κS']cuprate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 117697-21-9

CMF C20 H24 Cu S4

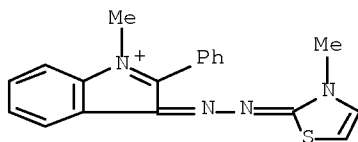
CCI CCS



CM 2

CRN 47340-09-0

CMF C19 H17 N4 S



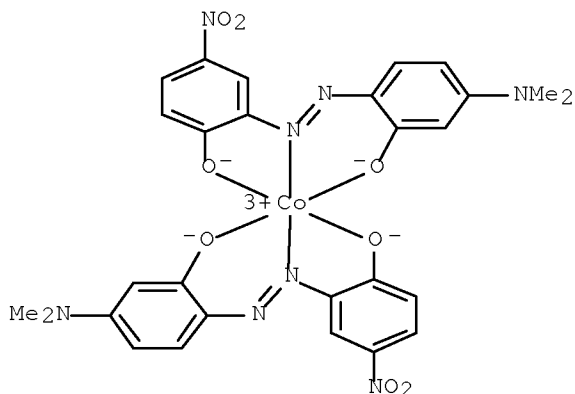
RN 220736-75-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, bis[2-[[4-(dimethylamino)-2-(hydroxy-κO)phenyl]azo-κN1]-4-nitrophenolato(2-)-κO]cobaltate(1-) (9CI) (CA INDEX NAME)

CM 1

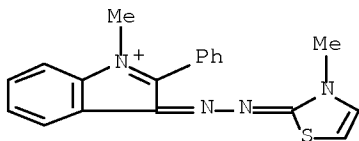
CRN 220736-71-0

CMF C28 H24 Co N8 O8
CCI CCS



CM 2

CRN 47340-09-0
CMF C19 H17 N4 S



L60 ANSWER 6 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:170978 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 118:170978

ORIGINAL REFERENCE NO.: 118:29311a,29314a

TITLE: Molecular structure of cationic dyes and their mixing properties

AUTHOR(S): Xie, Kongliang; Yang, Jinzong; Hou, Yufen

CORPORATE SOURCE: Inst. Chem. Eng., Dalian Univ. Technol., Dalian, 116012, Peop. Rep. China

SOURCE: Huagong Xuebao (Chinese Edition) (1992), 43(2), 247-54

CODEN: HUKHAI; ISSN: 0438-1157

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The mixing properties of F-containing triazine and azo cationic dyes could be described by the inorg. value (I)-organic value (O) ratio of the dye. The organic and inorg. values of the dye could be as: O value = $n+20 + \sum O_i$ and I value = $\sum I_i$ (where n is the carbon nos., O_i and I_i the organic value and inorg. value of the substitution group, resp.).

CC 41-2 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

IT Dyes

Dyes, azo

(cationic, mixing properties of, inorg. value-organic value ratio in relation to)

IT 6441-82-3 10532-41-9 14970-38-8 15000-59-6 25442-24-4
 25717-55-9 29508-47-2 29767-87-1 33273-26-6 38936-35-5
 42917-79-3 52028-88-3 52435-14-0 72208-21-0 73019-09-7
 83969-09-9 107175-87-1 146672-10-8 146672-12-0 146672-14-2
 146672-16-4 146672-17-5 146672-19-7 146672-20-0 146672-21-1
 146672-22-2 146672-23-3 146734-29-4

RL: MSC (Miscellaneous)

(dyes, mixing properties of, inorg. value-organic value ratio in relation to)

IT 25442-24-4

RL: MSC (Miscellaneous)

(dyes, mixing properties of, inorg. value-organic value ratio in relation to)

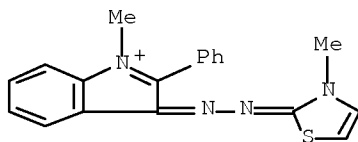
RN 25442-24-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

L60 ANSWER 7 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:410824 CAPLUS Full-text

DOCUMENT NUMBER: 115:10824

ORIGINAL REFERENCE NO.: 115:2047a,2050a

TITLE: Method for quaternization of nitrogen-containing heterocyclic azo dyes

AUTHOR(S): Simov, D.; Deligeorgiev, T.; Gadzhev, N.; Penchev, A.

CORPORATE SOURCE: Fac. Chem., Univ. Sofia, Sofia, 1126, Bulg.

SOURCE: Dyes and Pigments (1991), 15(2), 83-8

CODEN: DYPIDX; ISSN: 0143-7208

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 115:10824

AB A method is described for the quaternization of N-containing heterocyclic azo dyes using Me₂SO₄ or PhSO₂OMe as alkylation agents in a two-phase liquid medium. The method gives complete quaternization at high reaction rates and moderate reaction temps.

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

IT Dyes, azo
(heterocyclic, quaternization of, method for)

IT 12270-13-2P 15000-59-6P 25442-24-4P 59405-36-6P
69742-21-8P 89787-53-1P 134327-42-7P 134327-43-8P 134353-07-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, method for)

IT 25442-24-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, method for)

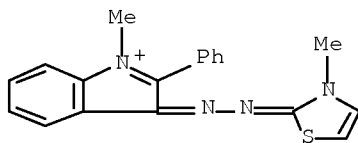
RN 25442-24-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

L60 ANSWER 8 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:124553 CAPLUS Full-text

DOCUMENT NUMBER: 114:124553

ORIGINAL REFERENCE NO.: 114:21213a, 21216a

TITLE: Basic dye tetrachloroferrate salts

INVENTOR(S): Dix, Johannes Peter; Hansen, Guenter; Kast, Hellmut

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW

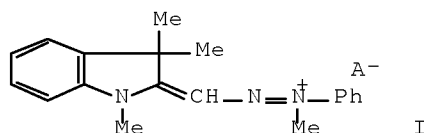
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 399395	A1	19901128	EP 1990-109440	19900518 <--
EP 399395	B1	19940309		
R: CH, DE, FR, GB, IT, LI				
DE 3917257	A1	19901129	DE 1989-3917257	19890526 <--
US 5073634	A	19911217	US 1990-517839	19900501 <--
JP 03062857	A	19910318	JP 1990-132763	19900524 <--
PRIORITY APPLN. INFO.:			DE 1989-3917257	A 19890526 <--
OTHER SOURCE(S):	MARPAT 114:124553			
GI				



AB The title dyes G+(FeCl₄)- (G = dye cation), useful for dyeing acrylic fibers or acid-modified polyester fibers (no date), which provide sufficient insoly. to allow basic dye purification with no contribution of Zn ions to wastewater streams, are prepared Thus, I (A = Cl) was reacted with an aqueous solution of FeCl₃, producing I (A = FeCl₄), λ_{max} 428 nm (no color data).

IC ICM C09B069-02

ICS D06P001-41

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 40

IT Dyes

(basic, salts with tetrachloroferrates, manufacture of, for acrylic or acid-modified polyester fibers)

IT	132482-53-2	132482-54-3	132482-55-4	132482-56-5	132482-57-6
	132482-58-7	132482-59-8	132482-60-1	132482-61-2	
	132758-55-5	132758-56-6	132758-57-7	132758-58-8	132758-59-9
	132758-60-2	132758-61-3	132758-62-4	132758-63-5	132758-64-6
	132758-65-7	132758-66-8	132758-67-9	132758-68-0	132758-69-1

RL: PROC (Process)

(Manufacture of, as dye for acrylic or acid-modified polyester fibers)

IT 132482-58-7

RL: PROC (Process)

(Manufacture of, as dye for acrylic or acid-modified polyester fibers)

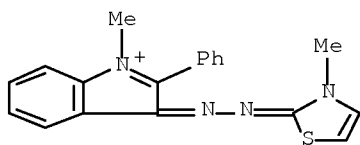
RN 132482-58-7 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, (T-4)-tetrachloroferrate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S

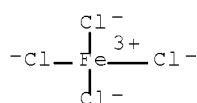


CM 2

CRN 14946-92-0

CMF C14 Fe

CCI CCS



L60 ANSWER 9 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:8222 CAPLUS Full-text

DOCUMENT NUMBER: 114:8222

ORIGINAL REFERENCE NO.: 114:1575a,1578a

TITLE: Concentrated cationic dye solutions

INVENTOR(S): Dix, Johannes Peter; Hansen, Guenter; Kast, Hellmut

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

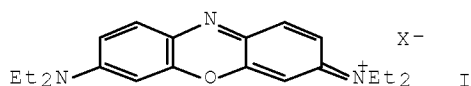
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3833195	A1	19900405	DE 1988-3833195	19880930 <--
US 4976744	A	19901211	US 1989-406244	19890912 <--
EP 361293	A2	19900404	EP 1989-117365	19890920 <--
EP 361293	A3	19911030		
EP 361293	B1	19940720		
R: CH, DE, FR, GB, IT, LI				
KR 9709079	B1	19970605	KR 1989-14022	19890929 <--
PRIORITY APPLN. INFO.:			DE 1988-3833195	A 19880930 <--

GI



AB Precipitation-resistance concentrated cationic dye solns. are prepared by anion exchange of cationic dyes in aqueous glycol ether solns. containing alkali metal salts of monocarboxylic acids, optionally in the presence of complexation agents, forming a monocarboxylic acid salt of the cationic dye in the organic phase of the reaction mixture. Thus, to a mixture of a 42.5% Na formate solution 739, sodium salts of nitrilotriacetic acid 49, ethyleneglycol monobutyl ether 108, and 57 mL H₂O, with added 121 g I (X = 1/2 ZnCl₄²⁻). The mixture was stirred for 3.5 h at room temperature, and phase separated, to produce 243 g of an ethyleneglycol monobutyl ether solution containing I (X = HCO₂⁻).

IC ICM C09B067-34
ICS C09B067-44

CC 40-6 (Textiles and Fibers)
Section cross-reference(s): 41

IT Dyes
(cationic, monocarboxylic acid salts of, manufacture of concentrated precipitation-resistant solns. containing)

IT 113534-44-4 129696-19-1 129696-20-4 129696-21-5 129696-22-6
129717-88-0 129717-89-1 129717-91-5 130953-16-1
RL: USES (Uses)
(manufacture of concentrated solns. containing, precipitation-resistant)

IT 42373-04-6 49722-08-9 54060-92-3 63589-33-3 63589-47-9
84788-03-4 129696-16-8 129696-17-9 129696-18-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with monocarboxylic acid alkali metal salts)

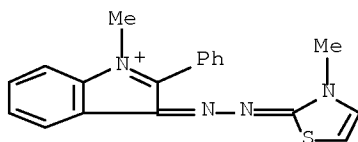
IT 129717-88-0
RL: USES (Uses)
(manufacture of concentrated solns. containing, precipitation-resistant)

RN 129717-88-0 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, salt with 2-ethylhexanoic acid (1:1) (9CI) (CA INDEX NAME)

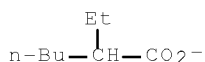
CM 1

CRN 47340-09-0
CMF C19 H17 N4 S



CM 2

CRN 18035-91-1
CMF C8 H15 O2

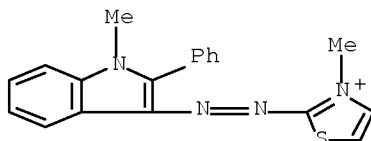


IT 42373-04-6

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with monocarboxylic acid alkali metal salts)

RN 42373-04-6 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
 chloride (1:1) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 10 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:577834 CAPLUS Full-text

DOCUMENT NUMBER: 105:177834

ORIGINAL REFERENCE NO.: 105:28587a, 28590a

TITLE: Sorption of Zalenol brown coal in aqueous solution.
 IV. Sorption of cationic dye

AUTHOR(S): Chen, Piya; Yang, Fenglian; Hu, Muzhong; Xiong,
 Lihong; Liu, Zhongli

CORPORATE SOURCE: East China Inst. Chem. Technol., Shanghai, Peop. Rep.
 China

SOURCE: Ranliao Huaxue Xuebao (1986), 14(2), 170-6
 CODEN: RHXUD8; ISSN: 0253-2409

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The Zalenol brown coal has a sorption capacity of 30-50 mg/g for cationic dyes in the treatment of dyeing wastewater; the sorption capacity for the dyes decreases in the order of Basacryl blue RL [15000-59-6] > Basacryl yellow 7GL [55798-23-7] > Basacryl red 2GL [25442-24-4]. The effective diffusion coefficient of the dyes in the coal is 1+10-9 cm²/s and the activation energy of diffusion is 4.37 kcal/mol.

CC 60-3 (Waste Treatment and Disposal)
 Section cross-reference(s): 40, 51, 61

IT 15000-59-6 25442-24-4 52435-14-0

RL: REM (Removal or disposal); PROC (Process)
 (removal of, from dyeing wastewater, by adsorption on Zalenol brown coal)

IT 25442-24-4

RL: REM (Removal or disposal); PROC (Process)
 (removal of, from dyeing wastewater, by adsorption on Zalenol brown coal)

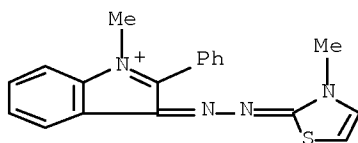
RN 25442-24-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

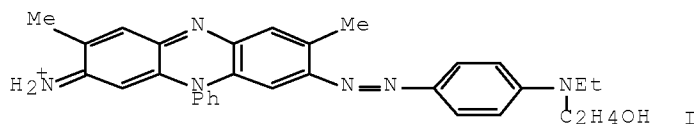
CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

L60 ANSWER 11 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1985:430297 CAPLUS Full-text
 DOCUMENT NUMBER: 103:30297
 ORIGINAL REFERENCE NO.: 103:4843a, 4846a
 TITLE: Radiation-sensitive compositions
 INVENTOR(S): Folkard, Christopher Walter; Millross, Christopher
 Robert
 PATENT ASSIGNEE(S): Vickers PLC, UK
 SOURCE: Eur. Pat. Appl., 30 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 127477	A2	19841205	EP 1984-303588	19840529 <--
EP 127477	A3	19861001		
EP 127477	B1	19921119		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4687728	A	19870818	US 1984-614993	19840529 <--
AT 82643	T	19921215	AT 1984-303588	19840529 <--
DK 8402696	A	19841201	DK 1984-2696	19840530 <--
FI 8402176	A	19841201	FI 1984-2176	19840530 <--
FI 78992	B	19890630		
FI 78992	C	19891010		
NO 8402188	A	19841203	NO 1984-2188	19840530 <--
AU 8428849	A	19841206	AU 1984-28849	19840530 <--
AU 576764	B2	19880908		
CA 1253728	A1	19890509	CA 1984-455477	19840530 <--
PRIORITY APPLN. INFO.:			GB 1983-14918	A 19830531 <--
			EP 1984-303588	A 19840529 <--
OTHER SOURCE(S):			MARPAT 103:30297	
GI				



AB A photosensitive composition useful for lithog. plate production and as a photoresist contains a dye which undergoes a color change at temperature $\geq 180^\circ$ to assure proper baking of the produced image. Thus, an electrolytically grained, anodized Al support was coated with a composition containing epoxy resin ester of 4-azido- α -cyano- δ - chlorocinnamylideneacetic acid 3, 1,2-benzoanthraquinone 0.3, I 0.3%, and EtCOMe, dried at 65° for 5 min, imagewise exposed, and developed with a solvent to give a lithog. plate having a green image which was treated with a Na dodecylphenoxybenzenedisulfonate solution and baked for 10 min at 200° to give a red/brown image.

IC G03F007-02; G03F007-26

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 81-77-6 842-07-9 2869-83-2 3521-06-0 38901-82-5 47083-49-8
 61725-69-7 63404-49-9 66104-65-2 97065-34-4 97065-35-5
 97065-36-6 97065-37-7 97065-38-8 97065-39-9 97065-40-2
 97065-41-3 97065-42-4 97065-43-5 97065-44-6 97065-45-7
 97065-46-8 97065-47-9 97065-48-0 97065-49-1 97065-50-4
 97090-45-4 97090-46-5 97090-47-6

RL: USES (Uses)

(photoimaging composition for lithog. plate and photoresist production containing,

for color change during baking of produced images)

IT 97090-47-6

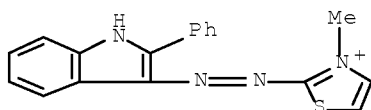
RL: USES (Uses)

(photoimaging composition for lithog. plate and photoresist production containing,

for color change during baking of produced images)

RN 97090-47-6 CAPLUS

CN Thiazolium, 3-methyl-2-[(2-phenyl-1H-indol-3-yl)azo]- (9CI) (CA INDEX NAME)



L60 ANSWER 12 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:148490 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 92:148490

ORIGINAL REFERENCE NO.: 92:24131a, 24134a

TITLE: Application of NMR spectroscopy and mass spectrometry to some problems concerning synthetic dyes: Part XIX. Behavior of some cationic dyes in the direct inlet system of a mass spectrometer

AUTHOR(S): Khanna, I. K.; Das, K. G.

CORPORATE SOURCE: Natl. Chem. Lab., Poona, 411008, India

SOURCE: Indian Journal of Chemistry, Section B: Organic

Chemistry Including Medicinal Chemistry (1979
, 17B(3), 233-8
CODEN: IJSBDB; ISSN: 0376-4699

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Primary pyrolytic reaction of cationic dyes in the direct inlet of a mass spectrometer can be a simple dissociative loss of a neutral mol. In the case of diazahemicyanine dyes, competing pyrolytic reactions can occur. The more volatile products give the mass spectra. Delocalization of charge appears to direct the degradation in cationic dyes having a resonating charge. In the case of triarylmethane dyes, ionization is preceded by an intermol. hydride transfer.

CC 40-1 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
Section cross-reference(s): 76, 80

IT Dyes, cyanine
(pyrolysis of, in direct inlet system of mass spectrometer)

IT Dyes
Dyes
(cationic, pyrolysis of, in direct inlet system of mass spectrometer)

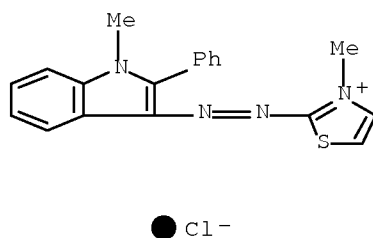
IT 477-73-6 477-73-6 569-64-2 2580-56-5 4451-88-1 8004-87-3
12217-50-4 12221-39-5 12221-40-8 12221-52-2 14097-03-1
15000-59-6 36904-42-4 42279-50-5 42373-04-6
47340-09-0 61901-59-5 69742-07-0 69771-44-4 74109-42-5
74109-44-7 74109-46-9 74109-47-0 74109-48-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(pyrolysis of, in direct inlet system of mass spectrometer)

IT 42373-04-6 47340-09-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(pyrolysis of, in direct inlet system of mass spectrometer)

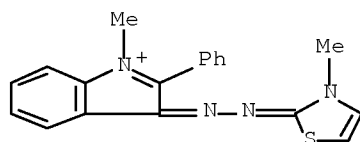
RN 42373-04-6 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
chloride (1:1) (CA INDEX NAME)



RN 47340-09-0 CAPLUS

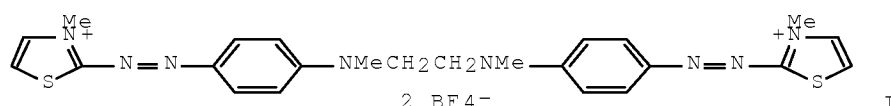
CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-
phenyl- (9CI) (CA INDEX NAME)



L60 ANSWER 13 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	1980:130534	CAPLUS	<u>Full-text</u>
DOCUMENT NUMBER:	92:130534		
ORIGINAL REFERENCE NO.:	92:21285a,21288a		
TITLE:	Spin-dyeing polymers or mixed polymers of acrylonitrile		
INVENTOR(S):	Haehnke, Manfred; Mohr, Reinhard; Hohmann, Kurt		
PATENT ASSIGNEE(S):	Hoechst A.-G., Fed. Rep. Ger.		
SOURCE:	Ger. Offen., 80 pp.		
	CODEN: GWXXBX		
DOCUMENT TYPE:	Patent		
LANGUAGE:	German		
FAMILY ACC. NUM. COUNT:	1		
PATENT INFORMATION:			

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2822913	A1	19791129	DE 1978-2822913	19780526 <--
DE 2822913	C2	19820819		
JP 54156878	A	19791211	JP 1979-64096	19790525 <--
JP 63031591	B	19880624		
GB 2022099	A	19791212	GB 1979-18304	19790525 <--
GB 2022099	B	19821006		
BE 876584	A1	19791128	BE 1979-195425	19790528 <--
FR 2426752	A1	19791221	FR 1979-13466	19790528 <--
FR 2426752	B1	19850816		
US 4557732	A	19851210	US 1983-538800	19831004 <--
US 4607071	A	19860819	US 1985-734442	19850515 <--
PRIORITY APPLN. INFO.:			DE 1978-2822913	A 19780526 <--
			US 1979-40760	A1 19790521 <--
			US 1981-225851	A1 19810116 <--
			US 1982-420516	A2 19820920 <--
			US 1983-538800	A1 19831004 <--
OTHER SOURCE(S):		MARPAT 92:130534		
GI				



AB	<p>Acrylic fibers were dyed fast shades by the addition to the spinning bath of cationic dyes having a migration factor (M) ≤ 20, a combination number (K) < 2.5, and a cation weight > 310. These dyes show little bleeding in coagulation, drawing, and washing. Thus, 2-8 parts 5% solution of dye (I) [72971-14-3], (M = 2, K = 1-2, cation weight 492) was added to 100 parts 28% DMF solution of 94:5:1 acrylonitrile-Me acrylate-Na methallylsulfonate polymer [26658-88-8], the blue-violet solution was spun into 50% aqueous DMF, stretched, and washed to give a deeply-dyed, bluish violet fiber with good fastness. Bleeding in the coagulation, drawing, and washing baths was 0.08, 0.04, and $< 0.01\%$, resp.</p>					
IC	D01F006-18; D01F006-38; D01F006-40; D01F001-06					
CC	39-7 (Textiles)					
IT	5543-29-3	21583-03-9	26412-56-6	34912-23-7	57516-91-3	72969-48-3
	72969-50-7	72969-52-9	72969-53-0	72969-54-1	72969-56-3	

72969-57-4	72969-59-6	72969-61-0	72969-63-2	72969-65-4
72969-67-6	72969-69-8	72969-70-1	72969-71-2	72969-72-3
72969-74-5	72969-76-7	72969-78-9	72969-80-3	72969-81-4
72969-82-5	72969-84-7	72969-86-9	72969-87-0	72969-89-2
72969-90-5	72969-92-7	72969-94-9	72969-96-1	72969-98-3
72970-00-4	72970-01-5	72970-03-7	72970-04-8	72970-05-9
72970-07-1	72970-09-3	72970-11-7	72970-13-9	72970-15-1
72970-17-3	72970-18-4	72970-20-8	72970-22-0	72970-23-1
72970-25-3	72970-26-4	72970-27-5	72970-29-7	72970-31-1
72970-33-3	72970-35-5	72970-37-7	72970-38-8	72970-40-2
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72970-49-1	72970-51-5	72970-53-7	72970-54-8	72970-55-9
72970-57-1	72970-59-3	72970-60-6	72970-61-7	72970-63-9
72970-65-1	72970-67-3	72970-69-5	72970-71-9	72970-73-1
72970-75-3	72970-76-4	72970-78-6	72970-80-0	72970-82-2
72970-83-3	72970-84-4	72970-86-6	72970-88-8	72970-90-2
72970-92-4	72970-93-5	72970-94-6	72970-96-8	72970-98-0
72971-00-7	72971-01-8	72971-03-0	72971-05-2	72971-07-4
72971-09-6	72971-11-0	72971-12-1	72971-14-3	72979-59-0
72984-92-0	72987-69-0	72987-71-4	72987-73-6	72987-75-8
72987-77-0	72987-79-2	72987-80-5	72987-82-7	72987-84-9
72987-86-1	72987-88-3	73053-04-0	73053-05-1	73053-06-2
73053-07-3	73053-08-4	73053-09-5	73053-10-8	

RL: USES (Uses)

(spin dyeing of acrylic fibers by)

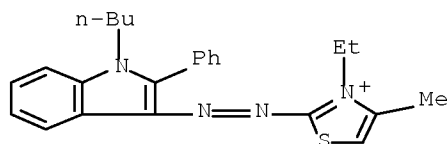
IT 72970-01-5

RL: USES (Uses)

(spin dyeing of acrylic fibers by)

RN 72970-01-5 CAPLUS

CN Thiazolium, 2-[(1-butyl-2-phenyl-1H-indol-3-yl)azo]-3-ethyl-4-methyl-, chloride (9CI) (CA INDEX NAME)

● Cl⁻

L60 ANSWER 14 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:130497 CAPLUS Full-text

DOCUMENT NUMBER: 92:130497

ORIGINAL REFERENCE NO.: 92:21277a, 21280a

TITLE: Improving the degree of whiteness of polymers and mixed polymers of acrylonitrile, especially during spinning from a spinning solution

INVENTOR(S): Haehnke, Manfred; Hohmann, Kurt; Mohr, Reinhard; Morhard, Inge

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

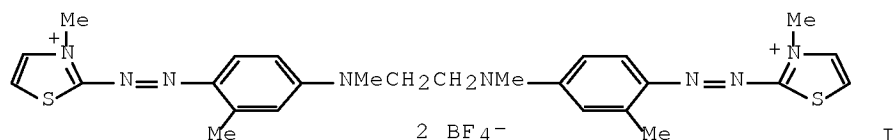
SOURCE: Ger. Offen., 41 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
DE 2822912	A1	19791129	DE 1978-2822912	19780526	<--
PRIORITY APPLN. INFO.:			DE 1978-2822912	A 19780526	<--
GI					



AB The degree of whiteness of acrylic fiber is improved by the addition of blue and violet cationic dyes and optionally red or bluish-red cationic dyes to the spinning bath, the dyes having a migration factor (M) ≤ 20 , a combination number (K) < 2.5 , and a cation weight > 310 . These dyes show no bleeding during coagulation, drawing, and washing. Thus, 1 part 0.5% solution of violet dye (I) [72971-36-9] (M = 2, K = 1-2, cation weight 520) was added to a 20% DMF solution of 94:5:1 acrylonitrile-Me acrylate-Na methallylsulfonate copolymer [26658-88-8], the solution was spun into 50% aqueous DMF, drawn, and washed to give a fiber which appeared white in artificial or daylight and had good fastness.

IC D01F006-38; D01F006-40; D01F001-06; C08L033-20

CC 39-2 (Textiles)

IT Dyes

(basic, whitening of acrylic fibers by, from spinning solns.)

IT Dyes, anthraquinone

Dyes, azo

(cationic, whitening of acrylic fibers by, from spinning solns.)

IT	17449-32-0	34077-04-8	71077-36-6	72892-38-7	72896-36-7
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72969-65-4 72969-92-7 72969-98-3 72970-01-5 72970-09-3

72970-11-7 72970-13-9 72970-76-4 72971-15-4 72971-17-6

72971-19-8 72971-21-2 72971-23-4 72971-25-6 72971-27-8

72971-29-0 72971-31-4 72971-32-5 72971-33-6 72971-34-7

72971-36-9 72987-71-4 72987-75-8 72987-90-7 72987-92-9

73053-04-0 73053-09-5 73082-56-1

RL: USES (Uses)

(whitening of acrylic fibers by, from spinning solution)

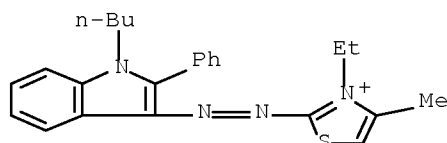
IT 72970-01-5

RL: USES (Uses)

(whitening of acrylic fibers by, from spinning solution)

RN 72970-01-5 CAPLUS

CN Thiazolium, 2-[(1-butyl-2-phenyl-1H-indol-3-yl)azo]-3-ethyl-4-methyl-,
chloride (9CI) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 15 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1980:112250 CAPLUS Full-text
 DOCUMENT NUMBER: 92:112250
 ORIGINAL REFERENCE NO.: 92:18319a,18322a
 TITLE: Quaternizing of organic dye bases
 INVENTOR(S): Bermes, Rudolf; Keilhauer, Heinz
 PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 9 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2825296	A1	19791213	DE 1978-2825296	19780609 <--

PRIORITY APPLN. INFO.: DE 1978-2825296 A 19780609 <--

AB N-Heterocyclic group-containing azo dyes are quaternized in the absence of a solvent by mixing the azo dye base with an excess of solid acid acceptor and a quaternizing agent, destroying the excess quaternizing agent with NH₃ or (NH₄)₂CO₃, and adding a solid acid to neutralize the excess base. Thus, a mixture of 2-C₁₀H₇NH₂→2,3,3-trimethylindolenine (I) [72919-82-5] 157, MgO 12, and Me₂SO₄ 76 parts was milled 20 h, 12 parts MgO and 86 parts Me₂SO₄ were added, the mixture was milled to completion of quaternization, and 30 parts (NH₄)₂CO₃ and 250 parts tartaric acid [87-69-4] were added during 4 h milling to give quaternized I [72919-84-7] which dyes acrylic fibers a little redder with much improved color purity compared to the dye prepared by the conventional method.

IC C09B043-00; C07C003-50
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 (dye bases, solid-state quaternization of)

IT 12270-13-2P 25442-24-4P 55425-38-2P 72919-79-0P
 72919-81-4P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

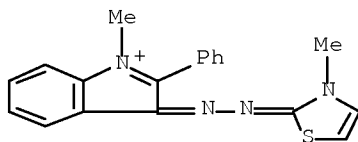
IT 25442-24-4P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

RN 25442-24-4 CAPLUS
 CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylydene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

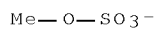
CMF C19 H17 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S



L60 ANSWER 16 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:153482 CAPLUS Full-text

DOCUMENT NUMBER: 90:153482

ORIGINAL REFERENCE NO.: 90:24414h,24415a

TITLE: Applications of NMR spectroscopy and mass spectrometry to some problems concerning synthetic dyes: Part XVIII. Action of potassium cyanide on some cationic dyes

AUTHOR(S): Khanna, I. K.; Venkataraman, K.

CORPORATE SOURCE: Natl. Chem. Lab., Poona, India

SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1978), 16B(9), 755-60

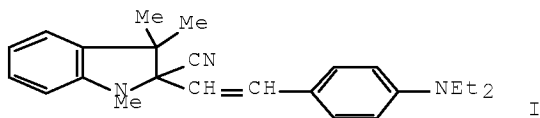
CODEN: IJSBDB; ISSN: 0376-4699

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 90:153482

GI



AB KCN reacts with triphenylmethane dyes to give leucocyanides, useful for determination of NMR and mass spectra, and with cyanine dyes of styryl, hemicyanine, or diazahemicyanine type to give either dehydrochlorination or CN addition products. The styryl-type cyanines form CN addition products (e.g., I [69742-23-0] from C.I. Basic Violet 16 [6359-45-1]) similar in structure to those products obtained by reaction with NaBH₄ [V. Parameswaran, et al.

(1974)]. Hemicyanines are smoothly dehydrochlorinated by cyanide. Diazahemicyanines prepared by using N-methyl-2-phenylindole as the coupling component are attacked by cyanide at the 2-position of the indole nucleus, whereas diazahemicyanines which have less tendency to form stable azines do not react. The cyanide reaction, which has some advantages over borohydride dequaternization, can be used in conjunction with NMR and mass spectroscopy for determining the undisclosed structure of com. cationic dyes.

CC 40-7 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

Section cross-reference(s): 80

IT Dyes

(triphenylmethane, reaction with potassium cyanide, spectrometric structure elucidation and)

IT Dyes, azo

(cationic, methylphenylindole derivs., reaction with potassium cyanide)

IT Dyes, cyanine

(cationic, reaction with potassium cyanide or sodium borohydride, spectrometric structure elucidation and)

IT 55120-57-5P 69742-10-5P 69742-11-6P 69742-12-7P

69742-14-9P 69742-16-1P 69742-23-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and NMR and mass spectra of)

IT 12221-39-5 12221-52-2 15000-59-6 42373-04-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with potassium cyanide or sodium borohydride)

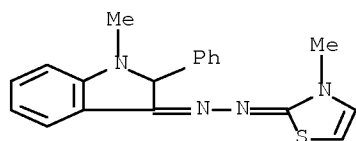
IT 69742-11-6P 69742-16-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and NMR and mass spectra of)

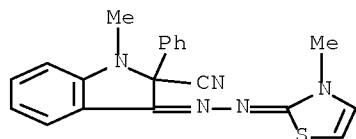
RN 69742-11-6 CAPLUS

CN 3H-Indol-3-one, 1,2-dihydro-1-methyl-2-phenyl-, (3-methyl-2(3H)-thiazolylidene)hydrazone (9CI) (CA INDEX NAME)



RN 69742-16-1 CAPLUS

CN 1H-Indole-2-carbonitrile, 2,3-dihydro-1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazone]-2-phenyl- (9CI) (CA INDEX NAME)



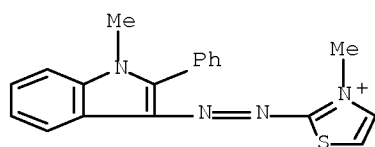
IT 42373-04-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with potassium cyanide or sodium borohydride)

RN 42373-04-6 CAPLUS

CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-, chloride (1:1) (CA INDEX NAME)

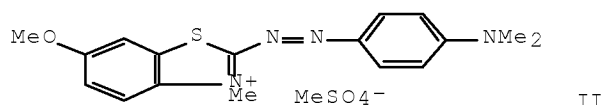


● Cl⁻

L60 ANSWER 17 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1978:38949 CAPLUS Full-text
 DOCUMENT NUMBER: 88:38949
 ORIGINAL REFERENCE NO.: 88:6123a,6126a
 TITLE: Concentrated solutions of basic dyes
 INVENTOR(S): Raue, Roderich; Kuehlthau, Hans Peter
 PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 32 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2616412	A1	19771027	DE 1976-2616412	19760414 <--
DE 2616412	B2	19800131		
JP 52126421	A	19771024	JP 1977-40999	19770412 <--
GB 1550306	A	19790808	GB 1977-15047	19770412 <--
CH 626391	A5	19811113	CH 1977-4497	19770412 <--
ES 457754	A1	19780216	ES 1977-457754	19770413 <--
BR 7702341	A	19780509	BR 1977-2341	19770413 <--
BE 853588	A1	19771014	BE 1977-176707	19770414 <--
FR 2348251	A1	19771110	FR 1977-11294	19770414 <--
FR 2348251	B1	19811224		
PRIORITY APPLN. INFO.:			DE 1976-2616412	A 19760414 <--

GI



AB Dye bases obtained by coupling diazotized 2-aminothiazoles or 2-aminobenzothiazoles with anilines or indoles are quaternized by treatment with a sulfate or toluenesulfonate ester in a completely or partially H₂O-miscible organic solvent, e.g. ethylene cyanohydrin (I) or 1,4-butylene glycol, to give concentrated, stable solns. of basic dyes. Thus, addition of 16 parts Me₂SO₄ to a mixture of 2-[[p-(dimethylamino)phenyl]azo]-6-methoxybenzothiazole [3771-31-1] 20, I 50, and MgO 1 part at 45°, heating 3 h at 45°, treatment

with 50 parts H₂O and 10 parts HOAc 1 h at 45° to destroy excess Me₂SO₄, and filtering (practically no residue present) gave 144 g solution of II [15000-59-6], which dyed acrylic fiber textiles a fast, clear blue shade.

IC C09B067-00

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

(alkyl[(aminoaryl)azo]benzothiazolium and -thiazolium salts, concentrated solns. of)

IT 12270-13-2 15000-59-6 15000-64-3 25442-24-4 65212-86-4
65212-87-5 65212-89-7 65212-91-1

RL: USES (Uses)

(concentrated solution of, for dyeing acrylic fibers)

IT 25442-24-4 65212-89-7 65212-91-1

RL: USES (Uses)

(concentrated solution of, for dyeing acrylic fibers)

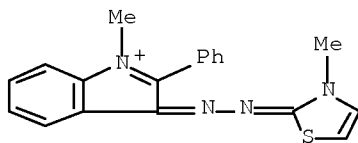
RN 25442-24-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

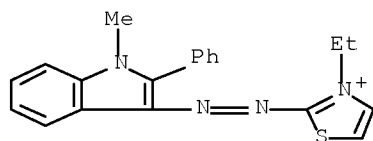
RN 65212-89-7 CAPLUS

CN Thiazolium, 3-ethyl-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65212-88-6

CMF C20 H19 N4 S



CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et—O—SO₃⁻

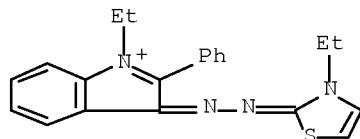
RN 65212-91-1 CAPLUS

CN 3H-Indolium, 1-ethyl-3-[(3-ethyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65212-90-0

CMF C21 H21 N4 S



CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et—O—SO₃⁻

L60 ANSWER 18 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1977:603059 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 87:203059

ORIGINAL REFERENCE NO.: 87:32153a,32156a

TITLE: Cationic dyes

INVENTOR(S): Manabe, Osamu; Karube, Goro; Okada, Yasuo

PATENT ASSIGNEE(S): Asahi Kagaku Kogyo K. K., Japan

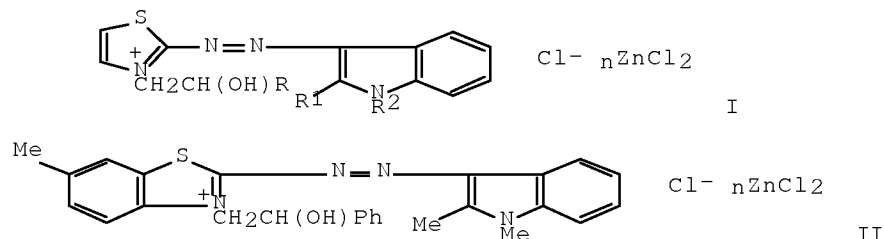
SOURCE: Jpn. Tokkyo Koho, 6 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52008334	B	19770308	JP 1970-64585	19700722 <--
PRIORITY APPLN. INFO.: GI			JP 1970-64585	A 19700722 <--



AB I (R = H, Me, Et, CH₂Cl; R₁ = Me, Ph; R₂ = H, Me, Et) and II [63560-28-1] were prepared and used for dyeing acrylic fibers. For example, 1-methyl-2-phenyl-3-[(2-thiazolyl)azo]indole (III) [34367-95-8] in 80% HCO₂H was quaternized with ethylene oxide [75-21-8] and salted with ZnCl₂ and NaCl to give I (R = H, R₁ = Ph, R₂ = Me) [63560-26-9], bluish red on acrylic fiber, with higher solubility and leveling than III quaternized with acrylamide. I (R = R₂ = Me, R₁ = Ph) [63560-29-2] and I (R = Et, R₁ = Ph, R₂ = Me) [63560-30-5] showed better fastness to potting than the acrylamide-quaternized.

IC C09B043-00

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

(cationic, (indolylazo)thiazolium and -benzothiazolium derivs., for acrylic fibers)

IT 63560-18-9 63560-20-3 63560-22-5 63560-24-7

63560-26-9 63560-28-1 63560-29-2 63560-30-5

RL: MSC (Miscellaneous)

(dyes, for acrylic fibers, manufacture of)

IT 63560-18-9 63560-22-5 63560-24-7

63560-26-9 63560-29-2 63560-30-5

RL: MSC (Miscellaneous)

(dyes, for acrylic fibers, manufacture of)

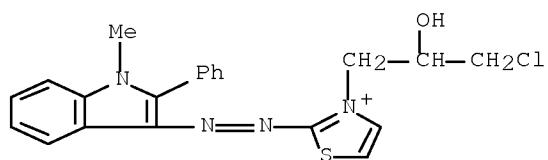
RN 63560-18-9 CAPLUS

CN Thiazolium, 3-(3-chloro-2-hydroxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl₂) (9CI) (CA INDEX NAME)

CM 1

CRN 63560-16-7

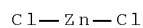
CMF C21 H20 Cl N4 O S . Cl



CM 2

CRN 7646-85-7

CMF Cl2 Zn



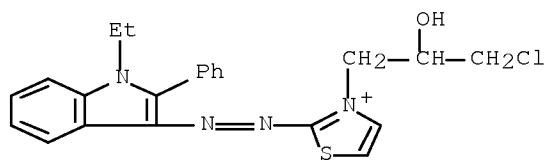
RN 63560-22-5 CAPLUS

CN Thiazolium, 3-(3-chloro-2-hydroxypropyl)-2-[(1-ethyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

CM 1

CRN 63560-21-4

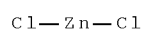
CMF C22 H22 Cl N4 O S . Cl



CM 2

CRN 7646-85-7

CMF Cl2 Zn



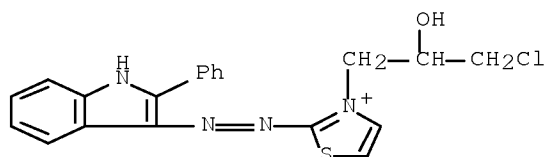
RN 63560-24-7 CAPLUS

CN Thiazolium, 3-(3-chloro-2-hydroxypropyl)-2-[(2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

CM 1

CRN 63560-23-6

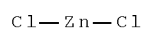
CMF C20 H18 Cl N4 O S . Cl



CM 2

CRN 7646-85-7

CMF Cl2 Zn



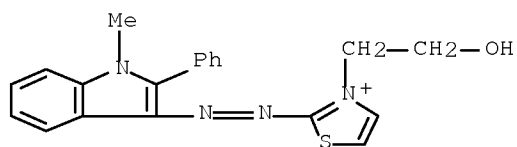
RN 63560-26-9 CAPLUS

CN Thiazolium, 3-(2-hydroxyethyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

CM 1

CRN 63560-25-8

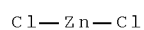
CMF C20 H19 N4 O S . Cl



CM 2

CRN 7646-85-7

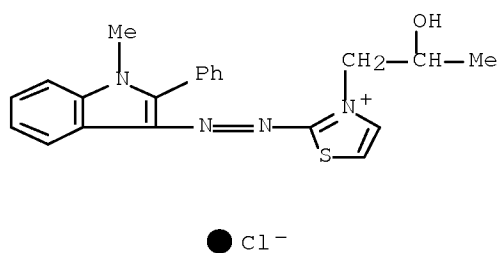
CMF Cl2 Zn



RN 63560-29-2 CAPLUS
 CN Thiazolium, 3-(2-hydroxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl₂) (9CI) (CA INDEX NAME)

CM 1

CRN 55993-16-3
 CMF C21 H21 N4 O S . Cl



CM 2

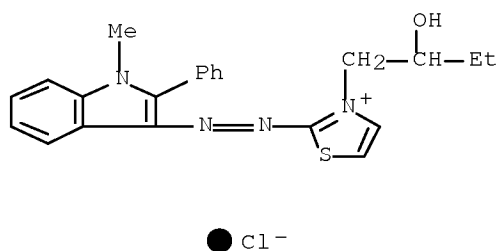
CRN 7646-85-7
 CMF Cl₂ Zn

Cl—Zn—Cl

RN 63560-30-5 CAPLUS
 CN Thiazolium, 3-(2-hydroxybutyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl₂) (9CI) (CA INDEX NAME)

CM 1

CRN 35650-06-7
 CMF C22 H23 N4 O S . Cl



CM 2

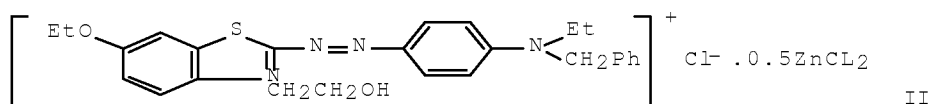
CRN 7646-85-7
 CMF Cl₂ Zn

Cl—Zn—Cl

L60 ANSWER 19 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1977:469731 CAPLUS Full-text
 DOCUMENT NUMBER: 87:69731
 ORIGINAL REFERENCE NO.: 87:11117a,11120a
 TITLE: Cationic dyes
 INVENTOR(S): Arakawa, Kyokuji; Yamamoto, Masao; Kurahashi, Takeo
 PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52039729	A	19770328	JP 1975-115666	19750926 <--
JP 58033262	B	19830719		

PRIORITY APPLN. INFO.: JP 1975-115666 A 19750926 <--
 GI



AB Cationic azo dyes are prepared by quaternizing (benzo)thiazole azo compds. with ethylene carbonate (I) [96-49-1] or propylene carbonate [108-32-7] in place of conventional ethylene oxide or propylene oxide, resp., in the presence of catalysts. For example, 2-[[4-(N-benzyl-N-ethylamino)phenyl]azo]-6-ethoxybenzothiazole [13486-49-2] dissolved in I at 100° was treated with AlCl₃ at 110° for 1.5 h, taken up in water, and salted with ZnCl₂-NaCl to give II [63345-83-5], blue on acrylic and modified polyester fibers.

IC C09B043-00
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 (cationic, (benzo)thiazolium azo derivs., for acrylic and modified polyester fibers)

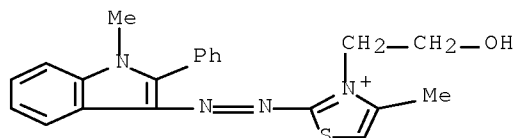
IT 63345-71-1 63345-73-3 63345-75-5 63345-77-7 63345-79-9
 63345-81-3 63345-83-5 63388-39-6
 RL: MSC (Miscellaneous)
 (dyes, for acrylic and modified polyester fibers, manufacture of)

IT 63345-77-7 63345-81-3
 RL: MSC (Miscellaneous)
 (dyes, for acrylic and modified polyester fibers, manufacture of)

RN 63345-77-7 CAPLUS
 CN Thiazolium, 3-(2-hydroxyethyl)-4-methyl-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, (T-4)-tetrachlorozincate(2-) (2:1) (9CI) (CA INDEX NAME)

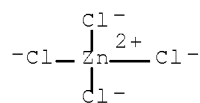
CM 1

CRN 63345-76-6
 CMF C21 H21 N4 O S



CM 2

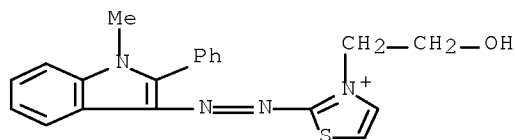
CRN 15201-05-5
 CMF C14 Zn
 CCI CCS



RN 63345-81-3 CAPLUS
 CN Thiazolium, 3-(2-hydroxyethyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, (T-4)-tetrachlorozincate(2-) (2:1) (9CI) (CA INDEX NAME)

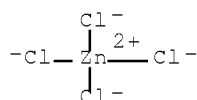
CM 1

CRN 63345-80-2
 CMF C20 H19 N4 O S



CM 2

CRN 15201-05-5
 CMF C14 Zn
 CCI CCS



L60 ANSWER 20 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1976:137212 CAPLUS Full-text

DOCUMENT NUMBER: 84:137212

ORIGINAL REFERENCE NO.: 84:22319a,22322a

TITLE: Thiazole azo dyes

INVENTOR(S): Hohmann, Knut; Mohr, Reinhard; Haehnke, Manfred

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 25 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2433229	A1	19760129	DE 1974-2433229	19740711 <--
DE 2433229	B2	19781005		
DE 2433229	C3	19790607		
NL 7508015	A	19760113	NL 1975-8015	19750704 <--
US 4046752	A	19770906	US 1975-594111	19750708 <--
CH 629519	A5	19820430	CH 1975-8901	19750708 <--
DD 120038	A5	19760520	DD 1975-187203	19750709 <--
IN 141858	A1	19770423	IN 1975-CA1340	19750709 <--
GB 1498744	A	19780125	GB 1975-28870	19750709 <--
FR 2277832	A1	19760206	FR 1975-21652	19750710 <--
FR 2277832	B1	19781103		
JP 51031725	A	19760318	JP 1975-84028	19750710 <--
JP 58045468	B	19831011		
BR 7504360	A	19760706	BR 1975-4360	19750710 <--
CA 1059120	A1	19790724	CA 1975-231251	19750710 <--
BE 831309	A1	19760112	BE 1975-158247	19750711 <--
PRIORITY APPLN. INFO.:			DE 1974-2433229	A 19740711 <--

GI For diagram(s), see printed CA Issue.

AB 2-Aminothiazole (II) [96-50-4] or its derivs. were prepared by the condensation of H₂NCSNH₂ [62-56-6] with ClCH₂CHO [107-20-0] or its derivs. and used without isolation as either the diazo or coupling component in the manufacture of thiazole group-containing cationic and disperse azo dyes. Thus, a H₂O solution of ClCH₂CHO was added to a suspension of H₂NCSNH₂ in HOAc, the solution was stirred for 2 hr at 40-50°, cooled to 0°, the nonisolated I diazotized with nitrosylsulfuric acid, and coupled with N-(3-methylphenyl)morpholine [7025-91-4] to give II [58709-28-7].

IC C09B

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

(intermediates, aminothiazole derivs., in situ preparation and coupling of)

IT 25442-24-4 58709-02-7 58709-05-0 58709-08-3 58709-10-7

58709-15-2 58709-18-5 58709-20-9 58709-22-1 58709-24-3

RL: USES (Uses)

(dye, for acrylic fibers, preparation of)

IT 25442-24-4

RL: USES (Uses)

(dye, for acrylic fibers, preparation of)

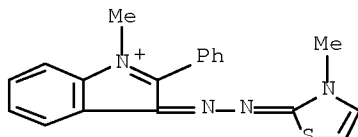
RN 25442-24-4 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

L60 ANSWER 21 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:516920 CAPLUS Full-text

DOCUMENT NUMBER: 83:116920

ORIGINAL REFERENCE NO.: 83:18387a,18390a

TITLE: Dyeing of acrylic fibers

INVENTOR(S): Inoue, Shozo; Honda, Hiroshi; Abe, Katsumi

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

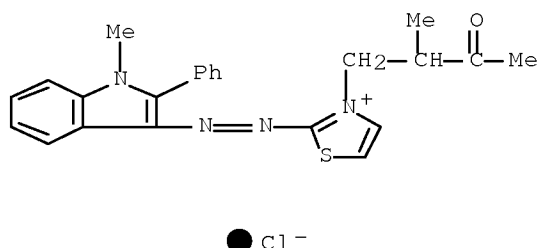
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 49125672	A	19741202	JP 1973-41654	19730412 <--
PRIORITY APPLN. INFO.:			JP 1973-41654	A 19730412 <--

GI For diagram(s), see printed CA Issue.

AB Acrylic fibers were dyed with monoazo dyes I (R1 = alkyl, aralkyl, aryl, R2 = H, alkyl, R3R4 = alkyl or arylene residue, or R3R4 = H, nondissocg. substituent, X- = anion). For example, 2-aminothiazole [96-50-4] was diazotized, coupled with 1-methyl-2-phenylindole [3558-24-5], and treated with isopropenyl methyl ketone [814-78-8] in AcOH to give I (R1 = Ph, R2 = Me, R3 = R4 = H, X = Cl) [54736-63-9], red on acrylic fiber; bluish red I (R1 = Ph, R2 = Me, R3R4 = benzo, X = ZnCl3) was also prepared

INCL 48B0; 48B111; 23D0

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 (indolylazothiazolium and benzothiazolium compds., for acrylic fibers)
 IT 54736-63-9 54785-96-5
 RL: MSC (Miscellaneous)
 (dyes, for acrylic fibers)
 IT 54736-63-9
 RL: MSC (Miscellaneous)
 (dyes, for acrylic fibers)
 RN 54736-63-9 CAPLUS
 CN Thiazolium, 3-(2-methyl-3-oxobutyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



L60 ANSWER 22 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:499172 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 83:99172

ORIGINAL REFERENCE NO.: 83:15595a,15598a

TITLE: Basic azo dyes

INVENTOR(S): Inoue, Shozo; Honda, Hiroshi; Abe, Katsumi

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50029646	A	19750325	JP 1973-76366	19730706 <--
PRIORITY APPLN. INFO.:			JP 1973-76366	A 19730706 <--

GI For diagram(s), see printed CA Issue.

AB Basic dyes I, where RR1 may be benzo, R2 is alkyl, aralkyl, or aryl, R3 is H or alkyl, X- is an anion, and nonacidic substituents may be present as or in any of the R, are prepared by reaction of the appropriate (benzo)thiazolylazoindole derivative with CH2:CMcCOMe (II) [814-78-8] in the presence of a protonic acid. For example, a mixture of 1-methyl-2-phenyl-3-[(2-thiazolyl)azo]indole [34367-95-8] 31.8, iso-PrOH 120, 75% H3PO4 39.2, and II 25.3 parts was heated 4 hr at 70-5°, poured into 1500 parts H2O and treated with 225 parts NaCl and 3 parts ZnCl2 to give I (R = R1 = H, R2 = Ph, R3 = Me, X = Cl.xZnCl2) [55994-61-1], light- and washfast red on polyacrylonitrile fibers. Similar dyes were prepared from 3-[(2-benzothiazolyl)azo]-1-methyl-2-phenylindole [55773-66-5], 1-methyl-3-[(4-methyl-2-thiazolyl)azo]-2-phenylindole [55994-42-8], and 3-[(6-methoxy-2-benzothiazolyl)azo]-1-methyl-2-phenylindole [43051-26-9].

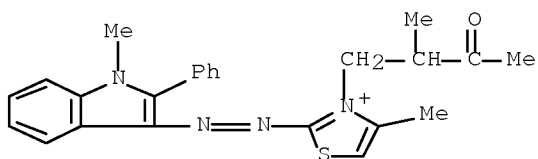
INCL 23D0; 48B111

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 (cationic (benzo)thiazolylazoindole derivs., acrylic fibers)
 IT 55994-56-4P 55994-58-6P 55994-60-0P 55994-61-1P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 IT 55994-58-6P 55994-61-1P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 55994-58-6 CAPLUS
 CN Thiazolium, 4-methyl-3-(2-methyl-3-oxobutyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl₂) (9CI) (CA INDEX NAME)

CM 1

CRN 55994-57-5

CMF C24 H25 N4 O S . Cl



● Cl⁻

CM 2

CRN 7646-85-7

CMF Cl₂ Zn

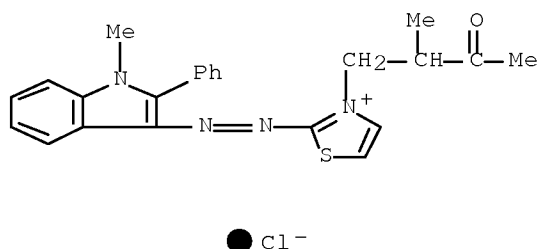
Cl—Zn—Cl

RN 55994-61-1 CAPLUS
 CN Thiazolium, 3-(2-methyl-3-oxobutyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl₂) (9CI) (CA INDEX NAME)

CM 1

CRN 54736-63-9

CMF C23 H23 N4 O S . Cl



CM 2

CRN 7646-85-7

CMF Cl2 Zn

Cl—Zn—Cl

L60 ANSWER 23 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:481194 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 83:81194

ORIGINAL REFERENCE NO.: 83:12753a,12756a

TITLE: Basic azo dyes

INVENTOR(S): Kawai, Hajime; Tsunemitsu, Katsuhika; Fujii, Yoshiharu

PATENT ASSIGNEE(S): Yamada Kagaku Kenkyusho Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50019827	A	19750303	JP 1973-69577	19730620 <--
JP 58028295	B	19830615		

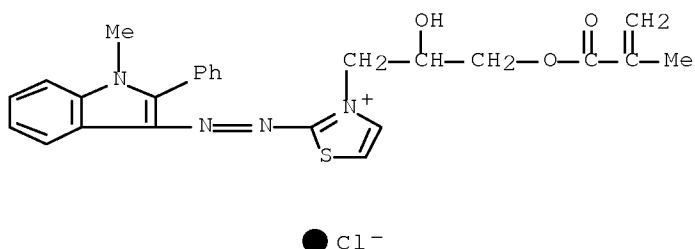
PRIORITY APPLN. INFO.: JP 1973-69577 A 19730620 <--

GI For diagram(s), see printed CA Issue.

AB Novel basic dyes [I; R is the residue of a coupling component II (R₄ = H, lower alkyl, or halogen; R₅, R₆ = lower alkyl, benzyl, aryl, haloalkyl, hydroxyalkyl, cyanoalkyl, alkoxyalkyl, or cyclohexyl or NR₅R₆ is a heterocyclic ring) or III (R₇, R₈ = H, lower alkyl, aryl, or benzyl); R₁, R₂ = H, alkyl, halogen, or R₁R₂ = benzo, which may bear nonionizing substituents; R₃ is a C₅ or lower saturated or unsatd. aliphatic group; X⁻ is an anion] are prepared by reaction of the thiazolylazo compound with the glycidyl ester of R₃CO₂H in the presence of a Broensted acid. For example, 2-[[4-(diethylamino)phenyl]azo]-6-methoxybenzothiazole [13443-90-8] was condensed with glycidyl methacrylate (IV) [106-91-2] in PhMe in the presence of HCO₂H and the product treated with NaCl to give a basic dye [55936-31-7], fast blue on polyacrylonitrile fibers. I were also prepared from 2-[[4-(benzylethylamino)phenyl]azo]-6-methoxybenzothiazole [13486-10-7] and glycidyl acetate [6387-89-9] and from 2-[(1-methyl-2-phenyl-3-indolyl)azo]thiazole [34367-95-8] and IV.

INCL 23D0; 48B111

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 (indolyl- or phenylazothiazoles quaternized with glycidyl esters,
 acrylic fibers)
 IT 55936-29-3P ~~55936-30-6P~~ 55936-31-7P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 IT ~~55936-30-6P~~
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 55936-30-6 CAPLUS
 CN Thiazolium, 3-[2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



L60 ANSWER 24 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1975:469092 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 83:69092
 ORIGINAL REFERENCE NO.: 83:10801a,10804a
 TITLE: Developer for electrophotography
 INVENTOR(S): Hotta, Seji; Kawahara, Hitoshi; Koseki, Fumio; Hatori, Minoru
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50010638	A	19750203	JP 1973-58982	19730525 <--
JP 56004912	B	19810202		
PRIORITY APPLN. INFO.:			JP 1973-58982	A 19730525 <--

GI For diagram(s), see printed CA Issue.
 AB A novel developer for electrophotog. contains as colorant a mixed lake obtained from a cationic azo dye 1-99 and a xanthene dye 99-1%. Thus, Rhodamine 6G Extra 2.32 parts was dissolved together with the cationic azo dye I 0.44 part in H₂O 200 and AcOH 0.2 part. A solution obtained by mixing H₂O 29, Na₂WO₄ 5.16, Na₂MoO₄ 2.67, and Na₂HPO₄ 0.87 part at 90°, and then heating further at 90° with HCl 4.6 parts was added to the above dye solution after coating to 50-55°, then heated to 80°, held at this temperature for 1 hr, filtered, washed, and dried to give a red lake. The lake 20, a rosin-modified phenol-HCHO resin 50, linseed oil 30, and Isopar G 320 parts were ball milled. A 2% Al stearate solution 3 volume parts was added to the above dispersion 5 volume parts, and diluted with Isopar G 500 volume parts to give a liquid

developer. When this developer was used to develop a neg.-charged latent image on a ZnO-bearing electrophotog. paper, an excellent red-colored copy was obtained with good optical d. and gradient reproducibility, and free of streaking.

INCL 103K112; 24(1)D0

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 55993-16-3

RL: USES (Uses)

(colorant, for toners for liquid electrophotog. developers)

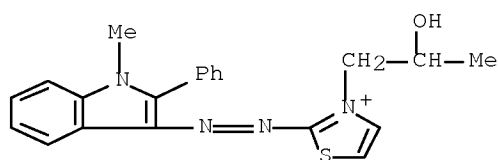
IT 55993-16-3

RL: USES (Uses)

(colorant, for toners for liquid electrophotog. developers)

RN 55993-16-3 CAPLUS

CN Thiazolium, 3-(2-hydroxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 25 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:178228 CAPLUS Full-text

DOCUMENT NUMBER: 82:178228

ORIGINAL REFERENCE NO.: 82:28433a,28436a

TITLE: Electrophotographic developers

INVENTOR(S): Hotta, Seiji; Kawahara, Hitoshi; Koseki, Fumio; Hatori, Minoru

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 49133034	A	19741220	JP 1973-47092	19730424 <--
JP 56004911	B	19810202		

PRIORITY APPLN. INFO.: JP 1973-47092 A 19730424 <--

GI For diagram(s), see printed CA Issue.

AB Lakes of cationic azo dyes, especially of I, II, and III are useful as the toner pigments for electrophotog. developers. The toners yield images having good d. with very little edge effect and no tailing of the developer from the solid image areas. Thus, I 2.64 parts was dissolved in H2O 200 and HOAc 0.2 parts, then mixed with a solution consisting of Na tungstate 5.16, Na molybdate 2.67, Na2HPO4 0.87, HCl 4.6, and H2O 29 parts, and heated at 80° to give a red colored phosphotungstatomolybdic acid lake of I. The lake 20, rosin-modified PhOH-HCHO resin 50, linseed oil varnish 30, and Isopar G 320 parts were ball-milled 20 hr to give a concentrated developer, 5 parts of

which was diluted with 500 parts of Isopar G, and then a 2% Al stearate solution 3 parts was added to the diluted developer. The image obtained by developing a ZnO electrophotog. paper having a neg. charged latent image using the developer had high d., good contrast, and no tailing of the developer during drying of the copy.

INCL 103K112

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT Dyes

(azo, lakes of cationic, as toner pigment for liquid electrophotog. developer)

IT 55349-86-5 55349-88-7 55349-89-8

RL: MOA (Modifier or additive use); USES (Uses)

(pigment, for toner of liquid electrophotog. developer)

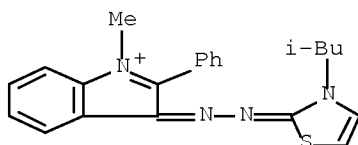
IT 55349-86-5

RL: MOA (Modifier or additive use); USES (Uses)

(pigment, for toner of liquid electrophotog. developer)

RN 55349-86-5 CAPLUS

CN 3H-Indolium, 1-methyl-3-[[3-(2-methylpropyl)-2(3H)-thiazolylidene]hydrazone]-2-phenyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 26 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:113173 CAPLUS Full-text

DOCUMENT NUMBER: 82:113173

ORIGINAL REFERENCE NO.: 82:18091a,18094a

TITLE: Basic azo dye

INVENTOR(S): Kozutsumi, Minoru; Maeda, Shigeo; Niimura, Isao

PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 10 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 49021285	B	19740531	JP 1970-106884	19701204 <--
PRIORITY APPLN. INFO.:			JP 1970-106884	19701204 <--

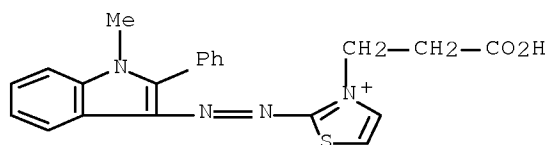
GI For diagram(s), see printed CA Issue.

AB Basic dyes, I [54628-07-8], blue, II [54628-09-0], bluish red, and III [54628-10-3], yellowish red on acrylic fibers were prepared For example, -2-[4-(N-ethyl-N-benzylamino)phenylazo]-6-ethoxybenzothiazole [13486-49-2] was heated with acrylamide [79-06-1] and HCl at 90-100° for 3 hr, extracted with water, and salted (NaCl) to give I.

IC C09B

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo
 ((arylazo)benzothiazolium and (arylazo)thiazolium compds., for acrylic fibers)
 IT 54628-07-8 54628-09-0 54628-10-3
 RL: MSC (Miscellaneous)
 (dyes, for acrylic fibers)
 IT 54628-10-3
 RL: MSC (Miscellaneous)
 (dyes, for acrylic fibers)
 RN 54628-10-3 CAPLUS
 CN Thiazolium, 3-(2-carboxyethyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 27 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1974:537590 CAPLUS Full-text
 DOCUMENT NUMBER: 81:137590
 ORIGINAL REFERENCE NO.: 81:21651a,21654a
 TITLE: Coloring composition containing basic dyes
 INVENTOR(S): Takahashi, Masaoki; Fumishi, Michio
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd.
 SOURCE: Ger. Offen., 36 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2362649	A1	19740620	DE 1973-2362649	19731217 <--
JP 49081669	A	19740806	JP 1972-126522	19721216 <--
JP 57002747	B	19820118		
GB 1428010	A	19760317	GB 1973-57775	19731213 <--
CH 594723	A5	19780131	CH 1973-17488	19731213 <--
FR 2213324	A1	19740802	FR 1973-44909	19731214 <--
CA 1062409	A1	19790918	CA 1973-188239	19731214 <--
PRIORITY APPLN. INFO.:			JP 1972-126522	A 19721216 <--

AB Powder dyeing compns. for acrylic, acid-modified polyester, and their fiber blends which are easily handled and do not pollute the surroundings or dye the skin the were the salts of basic dyes and a sulfonic acid group-containing dispersing agents. Thus, 33 parts of C. I. Basic Yellow 11 was dissolved in 100 parts H2O and 66 parts of the Na salt of HCHO-2-Cl3H7SO3H polymer was added with stirring to give the difficultly C. I. Basic Yellow 11-formaldehyde-2-naphthalenesulfonic acid polymer salt (I) [52757-87-6]. I was milled and spray dried to give a powder composition
 IC C09B067-00A

CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes

(basic, salt with sulfo group-containing dispersant, acrylic and polyester fibers)

IT 52781-37-0 52781-38-1 52781-39-2

RL: USES (Uses)

(dyeing acrylic fibers with)

IT 52757-87-6P 52757-88-7P 52757-90-1P 52757-92-3P 52757-93-4P

52757-94-5P 52766-40-2P 52766-41-3P 52766-42-4P 52766-44-6P

52766-45-7P 52766-47-9P 52767-31-4P 52856-45-8P

52904-63-9P 52904-64-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

IT 52781-37-0

RL: USES (Uses)

(dyeing acrylic fibers with)

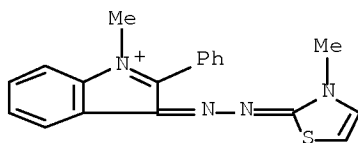
RN 52781-37-0 CAPLUS

CN 3H-Indolium, 1-methyl-3-[(3-methyl-2(3H)-thiazolylidene)hydrazono]-2-phenyl-, salt with formaldehyde polymer with naphthalenesulfonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 47340-09-0

CMF C19 H17 N4 S



CM 2

CRN 52781-36-9

CMF (C10 H7 O3 S . C H2 O)x

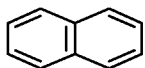
CCI PMS

CM 3

CRN 50852-11-4

CMF C10 H7 O3 S

CCI IDS



D1-SO₃⁻

CM 4

CRN 50-00-0
CMF C H2 O

H₂C=O

IT 52856-45-8P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)
RN 52856-45-8 CAPLUS
CN Thiazolium, 3-(3-amino-3-oxopropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, salt with formaldehyde polymer with 2-naphthalenesulfonic acid
(9CI) (CA INDEX NAME)

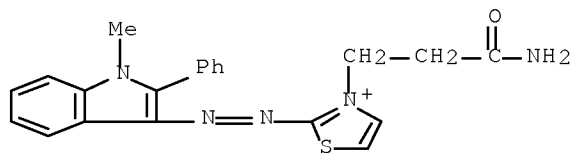
CM 1

CRN 52757-86-5
CMF (C H2 O . C10 H8 O3 S)x
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 50905-70-9
CMF C21 H20 N5 O S



L60 ANSWER 28 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1974:493023 CAPLUS Full-text
DOCUMENT NUMBER: 81:93023
ORIGINAL REFERENCE NO.: 81:14745a,14748a
TITLE: Polyacrylonitrile fiber dyes
INVENTOR(S): Yamada, Shogoro; Tsunemitsu, Katsuhiko
PATENT ASSIGNEE(S): Yamada Kagaku Kenkyusho Co., Ltd.
SOURCE: Jpn. Tokkyo Koho, 5 pp.
CODEN: JAXXAD

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48028394	B	19730831	JP 1972-103118	19721013 <--
PRIORITY APPLN. INFO.:			JP 1972-103118	19721013 <--

AB Azo dye (I) [52299-30-6] and azo dye (II) [52299-31-7] were prepared by reaction of the free base with propylene oxide in dioxane-H₂O in the presence of an acid and used to dye acrylic fibers level fast red and violet shades, resp.

IC D06P

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo
((hydroxypropyl)[(methylphenylindolyl)azo]thiazolium and -benzothiazolium derivs., acrylic fibers)

IT 52299-30-6P 52299-31-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

IT 52299-30-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

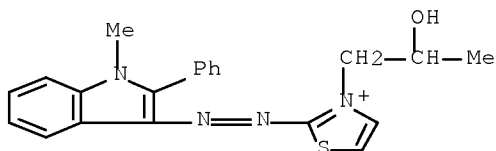
RN 52299-30-6 CAPLUS

CN Thiazolium, 3-(2-hydroxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, sulfate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 43051-27-0

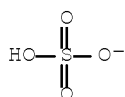
CMF C21 H21 N4 O S



CM 2

CRN 14996-02-2

CMF H O4 S



L60 ANSWER 29 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1974:465203 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 81:65203

ORIGINAL REFERENCE NO.: 81:10402h,10403a

TITLE: Cationic diazacyanine dyes

INVENTOR(S): Dorsch, Hans L.; Raue, Roderich

PATENT ASSIGNEE(S): Bayer A.-G.

SOURCE: Ger. Offen., 92 pp.
CODEN: GWXXBX

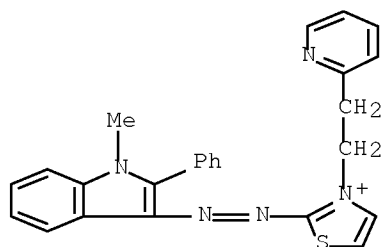
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2248738	A1	19740411	DE 1972-2248738	19721005 <--
JP 49073429	A	19740716	JP 1973-110610	19731003 <--
GB 1433939	A	19760428	GB 1973-46325	19731004 <--
FR 2202131	A1	19740503	FR 1973-35669	19731005 <--
CH 7314267	D	19760130	CH 1973-14267	19731005 <--
CH 578079	B5	19760730		
US 4006127	A	19770201	US 1973-403790	19731005 <--
			DE 1972-2248738	A 19721005 <--

PRIORITY APPLN. INFO.:
AB Cationic diazacyanine dyes [I, R = 2-pyridyl, 2-benzimidazolyl, 1-methyl-2-benzimidazolyl, 2-benzothiazolyl; R1 = p-Et2NC6H4, 2,4-Me(Et2N)C6H3, 1-methyl-2-phenyl-3-indolyl, 5-amino-3-methyl-1-phenyl-4-pyrazolyl, (dimethylbenzimidazolylidene)cyanomethyl; A = thiazole, benzothiazole, triazole residues] were prepared and dyed acrylic and acid modified polyester and polyamide fibers fast red to blue shades. Thus, 2-aminothiazole .far. PhNEt2 in HCO2H was heated with 2-vinylpyridine for 5 hr at 80.deg., dropped in H2O, and isolated using ZnCl2 to give diazacyanine dye (II) [52123-11-2], dyeing the fiber a clear blue shade. The other I were similarly prepared
IC C09B
CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
IT Dyes, azo
((aryloxy)(pyridylethyl)thiazolium and related compds., acrylic polyamide and polyester fibers)
IT 52018-09-4
RL: USES (Uses)
(dyeing by, of acrylic and acid modified polyester fibers)
IT 52018-07-2P 52018-09-4P 52018-11-8P 52018-13-0P
52018-15-2P 52018-17-4P 52018-19-6P
52048-35-8P 52123-11-2P 52704-89-9P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)
IT 52018-09-4
RL: USES (Uses)
(dyeing by, of acrylic and acid modified polyester fibers)
RN 52018-09-4 CAPLUS
CN Thiazolium, 2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-3-[2-(2-pyridinyl)ethyl]-, trichlorozincate(1-) (9CI) (CA INDEX NAME)
CM 1
CRN 52018-08-3
CMF C25 H22 N5 S

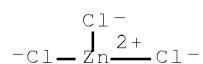


CM 2

CRN 23603-98-7

CMF Cl3 Zn

CCI CCS



IT 52018-09-4P 52018-13-0P 52018-15-2P

52018-17-4P 52018-19-6P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

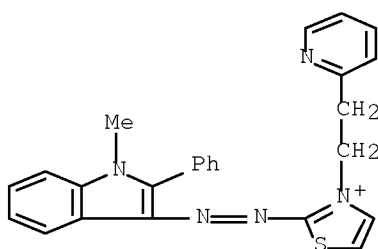
RN 52018-09-4 CAPLUS

CN Thiazolium, 2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-3-[2-(2-pyridinyl)ethyl]-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 52018-08-3

CMF C25 H22 N5 S

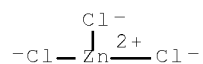


CM 2

CRN 23603-98-7

CMF Cl3 Zn

CCI CCS

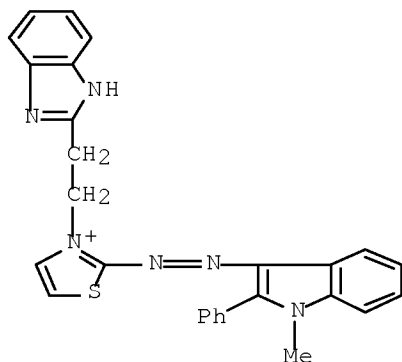


RN 52018-13-0 CAPLUS

CN Thiazolium, 3-[2-(1H-benzimidazol-2-yl)ethyl]-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

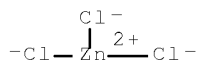
CM 1

CRN 52018-12-9
CMF C27 H23 N6 S



CM 2

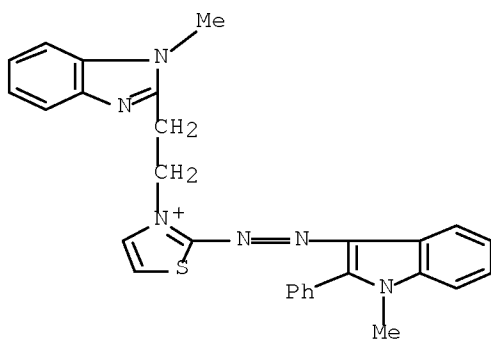
CRN 23603-98-7
CMF C13 Zn
CCI CCS



RN 52018-15-2 CAPLUS
CN Thiazolium, 3-[2-(1-methyl-1H-benzimidazol-2-yl)ethyl]-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

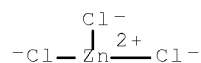
CM 1

CRN 52018-14-1
CMF C28 H25 N6 S



CM 2

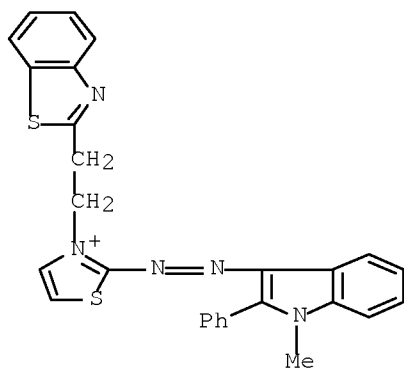
CRN 23603-98-7
 CMF C13 Zn
 CCI CCS



RN 52018-17-4 CAPLUS
 CN Thiazolium, 3-[2-(2-benzothiazolyl)ethyl]-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

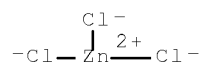
CM 1

CRN 52018-16-3
 CMF C27 H22 N5 S2



CM 2

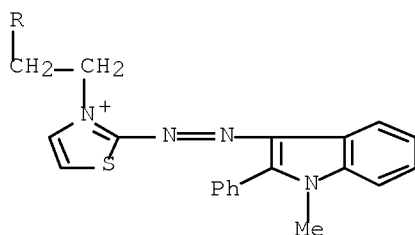
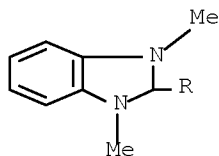
CRN 23603-98-7
 CMF C13 Zn
 CCI CCS



RN 52018-19-6 CAPLUS
 CN 1H-Benzimidazolium, 1,3-dimethyl-2-[2-[2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]thiazolium-3-yl]ethyl]-, (T-4)-tetrachlorozincate(2-) (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 52018-18-5
 CMF C29 H28 N6 S



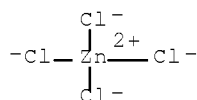
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 15201-05-5

CMF C14 Zn

CCI CCS



L60 ANSWER 30 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1974:465195 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 81:65195

ORIGINAL REFERENCE NO.: 81:10399a,10402a

TITLE: Fiber-reactive cationic dyes

INVENTOR(S): Kenmochi, Hirohito; Yamamoto, Masakazu; Ikeda, Takuo;
Korenaga, Yohji; Takeda, Yoshio; Ohkawa, Taksuaki

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 10 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48037967	B	19731114	JP 1970-50664	19700610 <--
PRIORITY APPLN. INFO.:			JP 1970-50664	19700610 <--

AB Cationic dyes containing amide groups linked to quaternary N by a methylene or ethylene bridge are treated with formaldehyde [50-00-0] in a lower alc. to give fiber-reactive dyes. For example, azo dye I (R = H) [52028-88-3] was heated 3 hr at 60-5.deg. and pH 7.5 (Na2CO3) with HCHO in MeOH, refluxed 2 hr with oxalic acid, and salted out with NaCl to give I (R = CH2OMe) [52028-89-

4], which gives fast blue shades on cellulosic, silk, wool, polyamide, vinal, and acrylic fibers. Similarly were prepared 5 addnl. azo dyes, anthraquinone dye II [52028-90-7], and benzindole dye III [52028-76-9].

IC C09B; C09A

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, reactive

(hydroxymethylated amide derivs. of cationic dyes)

IT 52028-75-8P 52028-76-9P 52028-79-2P 52028-81-6P 52028-82-7P

~~52028-83-8P~~ 52028-86-1P 52028-89-4P 52028-90-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

IT 52028-77-0 52028-78-1 52028-80-5 52028-84-9 52028-85-0

~~52028-87-2~~ 52028-88-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with formaldehyde)

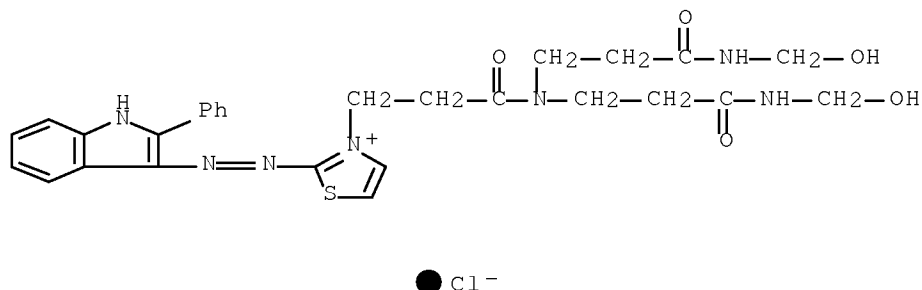
IT ~~52028-83-8P~~

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

RN 52028-83-8 CAPLUS

CN Thiazolium, 3-[3-[bis[3-[(hydroxymethyl)amino]-3-oxopropyl]amino]-3-oxopropyl]-2-[(2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



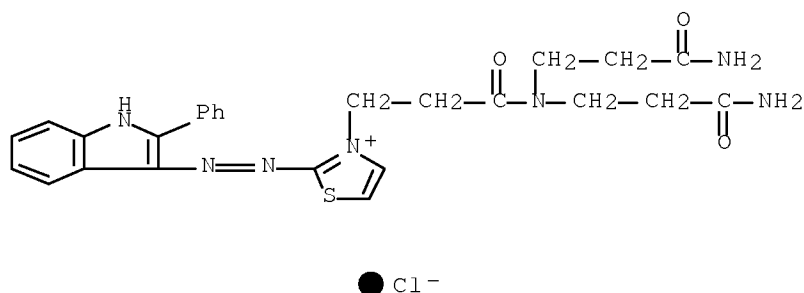
IT ~~52028-87-2~~

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with formaldehyde)

RN 52028-87-2 CAPLUS

CN Thiazolium, 3-[3-[bis(3-amino-3-oxopropyl)amino]-3-oxopropyl]-2-[(2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



L60 ANSWER 31 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1974:451113 CAPLUS Full-text
 DOCUMENT NUMBER: 81:51113
 ORIGINAL REFERENCE NO.: 81:8170h,8171a
 TITLE: Basic dyes
 INVENTOR(S): Fujino, Sadao; Honda, Hiroshi; Hattori, Takashi
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd.
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49009532	A	19740128	JP 1972-50961	19720523 <--
JP 57013590	B	19820318		

PRIORITY APPLN. INFO.: JP 1972-50961 A 19720523 <--

AB Basic dyes I [A = 5-or 6-membered, (un)substituted heterocycle except pyrazoline, R = lower alkyl, aralkyl, cyanoalkyl, carbamoylalkyl, R1 = alkyl, substituted phenyl, R2 = CN, NH2CO, CO2H, carboalkoxy, X- = anion, ring B optionally had halogen, lower alkyl, or lower alkoxy substituent(s)] were prepared by quaternization of free heterocyclic (ring A) bases with RX. For example, 5-amino-1,2,4-triazole was diazotized and coupled with 1-(2-cyanoethyl)-2-methylindole, and the azo dye was methylated with Me2SO4 in methanolic NaHCO3 and treated with HCl followed by salting to give basic dye I (A = 1-methyl-1(H)-1,2,4-triazol-5-yl, R = R1 = Me, R2 = CN, X = Cl) [51868-43-0], fast yellow on acrylic fiber. Also prepared were bluish red basic dye I (A = 6-methoxy-2-benzothiazolyl, R = R1 = Me, R2 = CN, X = Cl) [51868-44-1], reddish orange basic dye I (A = 2-thiazolyl, R = R1 = Me, R2 = CONH2, X = Cl) [51911-02-5], red basic dye I (A = 4-phenyl-2-thiazolyl, R = CH2CH2CONH2, R1 = Ph, R2 = CONH2, X- = Cl-.ZnCl2) [51962-73-3].

INCL 23D0; 48B111

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo
 ((indolylazo)benzothiazolium and thiazolium derivs., acrylic fibers)

IT 51868-42-9P 51868-43-0P 51868-44-1P 51911-02-5P 51962-73-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

IT 51962-73-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

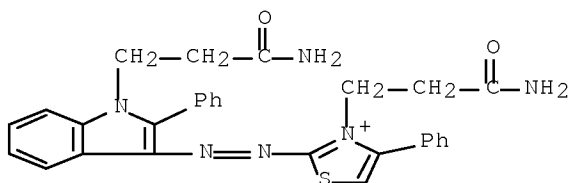
RN 51962-73-3 CAPLUS

CN Thiazolium, 3-(3-amino-3-oxopropyl)-2-[[1-(3-amino-3-oxopropyl)-2-phenyl-1H-indol-3-yl]azo]-4-phenyl-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 51962-72-2

CMF C29 H27 N6 O2 S

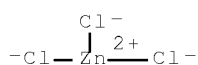


CM 2

CRN 23603-98-7

CMF C13 Zn

CCI CCS



L60 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1974:146962 CAPLUS Full-text
 DOCUMENT NUMBER: 80:146962
 ORIGINAL REFERENCE NO.: 80:23731a,23734a
 TITLE: Cationic diazacyanine dyes
 INVENTOR(S): Dorsch, Hans L.; Raue, Roderich
 PATENT ASSIGNEE(S): Bayer A.-G.
 SOURCE: Ger. Offen., 29 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2228147	A1	19731220	DE 1972-2228147	19720609 <--
NL 7307897	A	19731211	NL 1973-7897	19730606 <--
JP 49051316	A	19740518	JP 1973-63444	19730607 <--
IT 985347	B	19741130	IT 1973-50519	19730607 <--
CH 738307	D	19750415	CH 1973-8307	19730607 <--
CH 568441	B5	19751031		
CH 562853	A5	19750613	CH 1975-2336	19730607 <--
BE 800677	A1	19731210	BE 1973-132062	19730608 <--
FR 2187858	A1	19740118	FR 1973-20969	19730608 <--
GB 1405313	A	19750910	GB 1973-27461	19730608 <--

PRIORITY APPLN. INFO.: DE 1972-2228147 A 19720609 <--

AB Cationic diazacyanine dyes (I, R = CH₂:CHCH₂, Bu, PhCH₂; X = Cl, Br) were prepared and were used to dye acrylic fiber and acid- modified polyamide and polyester fibers in clear light- and sublimation-fast shades. Thus, 1-methyl-2-phenyl-3-(2-thiazolylazo)indole was treated with CH₂:CHCH₂Br in PhCl to give diazacyanide dye I (R = CH₂:CHCH₂, X = Br) [51553-09-4]. The other I were similarly prepared

IC C09B

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

((methylphenylindolyl)azo]thiazolium derivs., acrylic and acid modified polyamide and polyester fibers)

IT 51553-09-4P 51956-08-2P 51956-09-3P

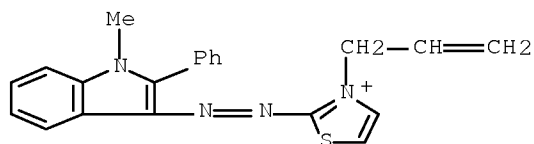
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

IT 51553-09-4P 51956-08-2P 51956-09-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

RN 51553-09-4 CAPLUS

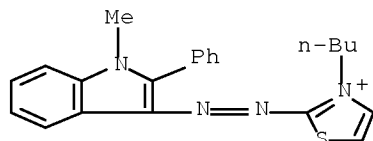
CN Thiazolium, 2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-3-(2-propenyl)-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 51956-08-2 CAPLUS

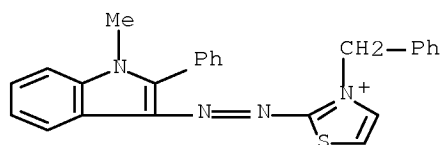
CN Thiazolium, 3-butyl-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 51956-09-3 CAPLUS

CN Thiazolium, 2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-3-(phenylmethyl)-, chloride (9CI) (CA INDEX NAME)

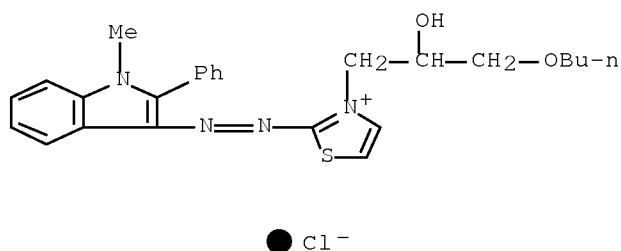


● Cl⁻

ACCESSION NUMBER: 1974:72077 CAPLUS Full-text
 DOCUMENT NUMBER: 80:72077
 ORIGINAL REFERENCE NO.: 80:11641a,11644a
 TITLE: Basic dyes
 INVENTOR(S): Ohkawa, Katsuaki; Kinoshita, Tadao; Kasai, Seizo;
 Takeda, Yoshio
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.
 SOURCE: Jpn. Tokkyo Koho, 4 pp.
 CODEN: JAXXAD
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48017727	B	19730531	JP 1970-114376	19701217 <--
PRIORITY APPLN. INFO.:			JP 1970-114376	19701217 <--

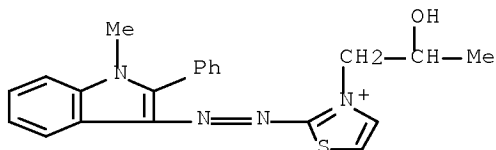
AB Basic azo dyes [I, R=H, Me; (RR1)=benzo; R1=H, Me, CN, NO2, MeO; R2= substituted or unsubstituted alkyl or aryl; R3=alkyl or substituted alkyl; X=anion] were prepared and were used to dye polyacrylonitrile fibers fast red to bluish red shades. Thus, 3-(2-thiazolylazo)-1-methyl-2- phenylindole was heated with butyl glycidyl ether [2426-08-6] in HOAc for 4 hr at 80-90.deg. and salted with NaCl to give azo dye I (R=R1=H, R2=Ph, R3=Me, X=Cl) [51026-43-8]. The other I were similarly prepared
 IC C09B
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 ((butoxyhydroxypropyl)(indolylazo)thiazolium derivs. acrylic fibers)
 IT 51026-43-8P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 IT 51026-43-8P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 51026-43-8 CAPLUS
 CN Thiazolium, 3-(3-butoxy-2-hydroxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



L60 ANSWER 34 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1974:49245 CAPLUS Full-text
 DOCUMENT NUMBER: 80:49245
 ORIGINAL REFERENCE NO.: 80:8031a,8034a
 TITLE: Basic dye
 INVENTOR(S): Yamada, Shogoro; Tsunemitsu, Katsuhiko
 PATENT ASSIGNEE(S): Yamada Kagaku Kenkyusho Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 4 pp.
 CODEN: JAXXAD
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 47045172	B4	19721114	JP 1968-7294	19680205 <--
AB	A red dye (I, A = thiazole residue)(II) [43051-27-0] and a violet dye (I, A = 6-methoxybenzothiazole residue)(III) [43051-28-1] were prepared by treating 1-methyl-2-phenyl-3-(2-thiazolylazo)indole and its 3-(6-methoxy-2-benzothiazolylazo) analog with propylene oxide in dioxane containing H ₂ SO ₄ at 80%. II and III are fast, level dyes for polyacrylonitrile fibers.				
IC	C09B				
CC	40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)				
IT	Dyes, azo ((indolylazo)thiazolium derivs., acrylic fibers)				
IT	43051-27-0P	43051-28-1P			
	RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)				
IT	43051-27-0P				
	RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)				
RN	43051-27-0	CAPLUS			
CN	Thiazolium, 3-(2-hydroxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]- (9CI) (CA INDEX NAME)				



L60 ANSWER 35 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1974:49242 CAPLUS Full-text
 DOCUMENT NUMBER: 80:49242
 ORIGINAL REFERENCE NO.: 80:8027a,8030a
 TITLE: Cationic dyes
 INVENTOR(S): Maruyama, Takeshi; Hamada, Eisuke; Tanaka, Satoshi;
 Nakamura, Takanori
 PATENT ASSIGNEE(S): Daito Chemical Industry Co., Ltd.
 SOURCE: Jpn. Tokkyo Koho, 3 pp.
 CODEN: JAXXAD
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

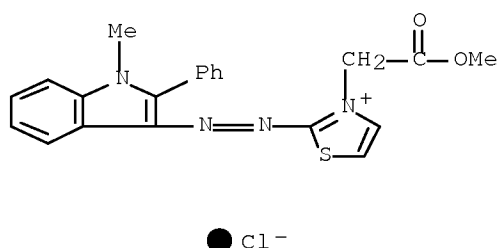
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 48000522	B4	19730109	JP 1970-67471	19700801 <--
AB	Cationic dyes (I, R = R1 = H, (R,R1) = benzo and Cl, MeO, EtO substituted benzo; R2 = Me, Et, Pr, Bu, CHMe ₂ ; R3 = Me, Ph; R4 = H, Me, Et; X = Cl, Br, Cl.xZnCl ₂) were prepared and were used to dye polyacrylonitrile and its				

copolymeric fibers fast shades. Thus, 1-methyl-2-phenyl-3-(2-thiazolylazo)indole was treated with ClCH₂CO₂Me in HOCH₂CH₂OH at 100-110.deg. for 5 hr, isolated using ZnCl₂, and salted with NaCl to give cationic dye (I, R = R₁ = H; R₂ = R₄ = Me, R₃ = Ph, X = Cl.xZnCl₂) [49831-01-8], fast red on polyacrylonitrile fibers.

IC C09B
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 ([[(carboxymethyl)thiazolium]azo]indole esters, acrylic fibers)
 IT 49831-01-8P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 IT 49831-01-8P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 49831-01-8 CAPLUS
 CN Thiazolium, 3-(2-methoxy-2-oxoethyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride, compd. with zinc chloride (ZnCl₂) (9CI) (CA INDEX NAME)

 CM 1

 CRN 49865-14-7
 CMF C21 H19 N4 O2 S . Cl



CM 2

 CRN 7646-85-7
 CMF Cl₂ Zn

Cl—Zn—Cl

L60 ANSWER 36 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1972:528053 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 77:128053
 ORIGINAL REFERENCE NO.: 77:21089a,21092a
 TITLE: Cationic dyes
 INVENTOR(S): Ohkawa, Masaaki; Tanaka, Yoshio; Takeda, Yoshiro;
 Kinoshita, Tadao; Hirabayashi, Kazuyoshi; Abeta,
 Sadaharu; Sasakura, Masaaki; Konishi, Seizo
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.
 SOURCE: S. African, 32 pp.

CODEN: SFXAB

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 7103630	A	19720126	ZA 1971-3630	19710604 <--
JP 48017647	B	19730531	JP 1970-51301	19700612 <--
JP 48028393	B	19730831	JP 1970-102137	19701118 <--
JP 48017508	B	19730530	JP 1970-124405	19701229 <--
GB 1348665	A	19740320	GB 1971-19948	19710610 <--
BE 768389	A1	19711103	BE 1971-104500	19710611 <--
FR 2095219	A5	19720211	FR 1971-21374	19710611 <--
FR 2095219	B1	19740322		
ES 392502	A1	19740701	ES 1971-392502	19710611 <--
CA 984384	A1	19760224	CA 1971-115403	19710611 <--
CH 567074	A5	19750930	CH 1971-8641	19710614 <--
US 4018756	A	19770419	US 1971-153080	19710614 <--

PRIORITY APPLN. INFO.:

JP 1970-51301	A	19700612 <--
JP 1970-51302	A	19700612 <--
JP 1970-65227	A	19700724 <--
JP 1970-79751	A	19700910 <--
JP 1970-102137	A	19701118 <--
JP 1970-114374	A	19701217 <--
JP 1970-124405	A	19701229 <--

AB Five blue dyes (I, R = Me or Et; R1 = Me, OMe, OBU; R2 = Et, Me, Bu, cyclohexyl; R3 = Et, CH2Ph, CH2CH2OMe; X = ZnCl3 or Cl) and 4 red dyes [II, R = H, R1 = Me, or (RR1) = CH:CHCH:CH; R2 = Me, OMe, OBU; R3 = H or Cl; R4 = Me or CH2CH2OMe] were prepared by reaction of epoxides with azo thiazoles and dyed polyacrylonitrile fibers fast level shades. For example, 2-amino-6-ethoxybenzothiazole .far. PhNet2 was condensed with glycidyl Me ether and treated with ZnCl2 and NaCl to give azo dye I (R = Et, R1 = OMe, R2 = R3 = Et, X = ZnCl3) [34590-84-6], which had good water solubility and dyed polyacrylonitrile a heatfast level greenish blue shade. Similarly prepared was azo dye II (R = R1 = R3 = H; R2 = MeO; R4 = Me; X = Cl) [34546-24-2], also having good water solubility and dyeing polyacrylonitrile a level yellowish red shade fast to light, heat, and cleaning.

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

((alkoxyhydroxypropyl)thiazolium derivs., acrylic fibers)

IT 34546-24-2P 34590-84-6P 35650-04-5P 35650-05-6P

35650-06-7P 35931-55-6P 38151-93-8P 38354-83-5P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

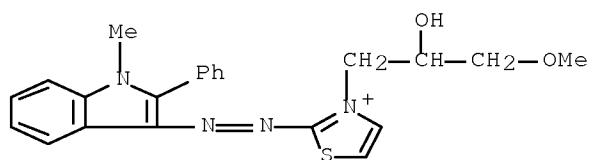
IT 34546-24-2P 35650-06-7P 35931-55-6P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

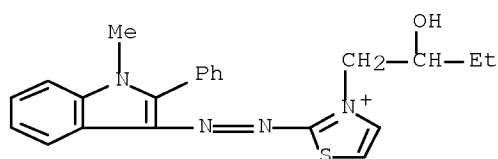
RN 34546-24-2 CAPLUS

CN Thiazolium, 3-(2-hydroxy-3-methoxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



RN 35650-06-7 CAPLUS

CN Thiazolium, 3-(2-hydroxybutyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



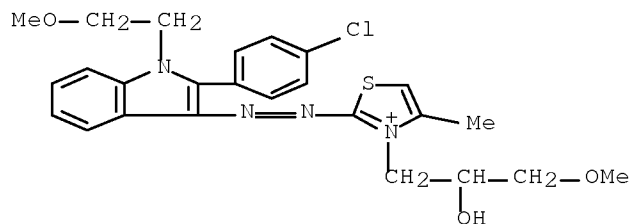
RN 35931-55-6 CAPLUS

CN Thiazolium, 2-[[2-(4-chlorophenyl)-1-(2-methoxyethyl)-1H-indol-3-yl]azo]-3-(2-hydroxy-3-methoxypropyl)-4-methyl-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47743-64-6

CMF C25 H28 Cl N4 O3 S

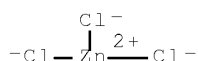


CM 2

CRN 23603-98-7

CMF C13 Zn

CCI CCS



L60 ANSWER 37 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1972:407294 CAPLUS Full-text

DOCUMENT NUMBER: 77:7294

ORIGINAL REFERENCE NO.: 77:1259a,1262a

TITLE: Cationic azo dyes

INVENTOR(S): Ohkawa, Masaaki; Takeda, Yoshiro; Kinoshita, Tadao;
Hirabayashi, Kazuyoshi; Abeta, Sadaharu; Konishi,
Seizo

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.

SOURCE: Ger. Offen., 26 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2136974	A	19720203	DE 1971-2136974	19710723 <--
JP 48017723	B	19730531	JP 1970-65226	19700724 <--
JP 48017726	B	19730531	JP 1970-114375	19701217 <--
ZA 7104769	A	19720426	ZA 1971-4769	19710719 <--
AU 7131461	A	19730215	AU 1971-31461	19710720 <--
BE 770437	A1	19711201	BE 1971-106305	19710723 <--
NL 7110179	A	19720126	NL 1971-10179	19710723 <--
FR 2103304	A5	19720407	FR 1971-27141	19710723 <--
PRIORITY APPLN. INFO.:			JP 1970-65226	A 19700724 <--
			JP 1970-77320	A 19700902 <--
			JP 1970-114375	A 19701217 <--

AB The water-soluble azo dyes I, where R = OMe or OEt and R1,R2 = Et, CH2CH2CN, CH2CH(OH)CH2OBu, Bu, or CH2CH2OMe, and II, where R = Me or Ph, R1,R2 = H, or R1R2 = CH:CHCH:CH, were prepared and used to dye polyacrylonitrile fibers with heat- and lightfast blue and red shades, resp. Thus, heating N,N-diethyl-p-[(6-methoxy-2-benzothiazolyl)azo]aniline and CH2:CHCONHBu-tert in iso-PrOH, HOAc, and H2SO4 followed by treating the product with NaCl in H2O gave the benzothiazole derivative (I, R = OMe, R1 = R2 = Et) [34740-82-4]. Similarly prepared were 3 other I and 3 other II.

IC C09B

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

((tert-butylcarbamoylethyl)benzothiazolium derivs. of azo compds., acrylic fiber)

IT 34740-82-4P 36813-87-3P 36815-73-3P 36815-74-4P 36815-75-5P
36815-76-6P 36987-23-2P

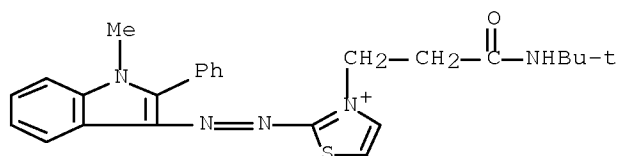
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

IT 36815-75-5P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

RN 36815-75-5 CAPLUS

CN Thiazolium, 3-[3-[(1,1-dimethylethyl)amino]-3-oxopropyl]-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



L60 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1972:114829 CAPLUS Full-text

DOCUMENT NUMBER: 76:114829

ORIGINAL REFERENCE NO.: 76:18555a,18558a

TITLE: Cationic azo dyes

INVENTOR(S): Ohkawa, Masaaki; Tanaka, Yoshio; Takeda, Yoshiro;
Kinoshita, Tadao; Hirabayashi, Kazuyoshi; Abeta,
Sadaharu; Sasakura, Masaaki; Konishi, Seizo

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.

SOURCE: Ger. Offen., 44 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2129271	A	19711216	DE 1971-2129271	19710612 <--
DE 2129271	B2	19760325		
DE 2129271	C3	19761111		

PRIORITY APPLN. INFO.: DE 1971-2129271 19710612 <--

AB Title dyes I (R, R1 = Me, Et; R2, R3 = Cl-4 alkyl, cyclohexyl, CH2CH2OMe; X = Cl, ZnCl3) and II [R, R1 = H, Me or (RR1) = benzo; R2 = MeO, Me; Z = H, Cl; R3 = Me, CH2CH2OMe; X = Cl, ZnCl3] were prepared by N-alkylation of azo compds. with glycidyl Me ether (III) or butylene oxide in the presence of an acid. I dye polyacrylonitrile fibers blue shades fast to light and especially steam, and II give level ed dyeings fast to sunlight, washing, and heat. Thus, p-(6-ethoxy-2-benzothiazolylazo)-N,N-diethylaniline was added to III in AcOH, the mixture heated 4 hr at 90-5.deg., the AcOH evaporated, the residue dissolved in H2O, and ZnCl2 and NaCl added to precipitate the cationic dye (I, R = R2 = R3 = Et; R1 = Me; X = ZnCl3) [34590-84-6]. Similarly prepared were cationic dye II(R = R1 = Z = H; R2 = MeO; R3 = Me; X = Cl) [34546-24-2] and 6 other dyes.

IC C09B

CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, azo

((alkoxyhydroxypropyl)benzothiazolium derivs., acrylic fiber)

IT 34546-24-2P 34590-84-6P 35650-03-4P 35650-04-5P

35650-05-6P 35650-06-7P 35824-45-4P 35931-55-6P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

IT 34546-24-2P 35650-06-7P 35931-55-6P

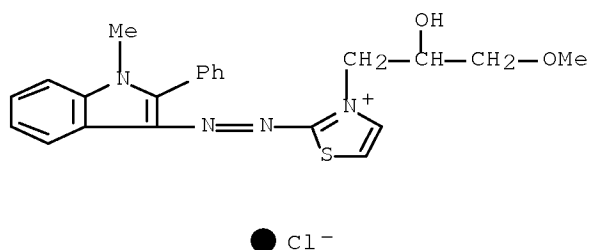
RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

RN 34546-24-2 CAPLUS

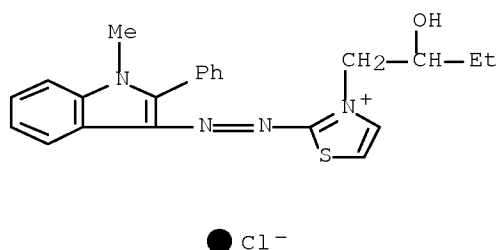
CN Thiazolium, 3-(2-hydroxy-3-methoxypropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-

yl)azo]-, chloride (9CI) (CA INDEX NAME)



RN 35650-06-7 CAPLUS

CN Thiazolium, 3-(2-hydroxybutyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride (9CI) (CA INDEX NAME)



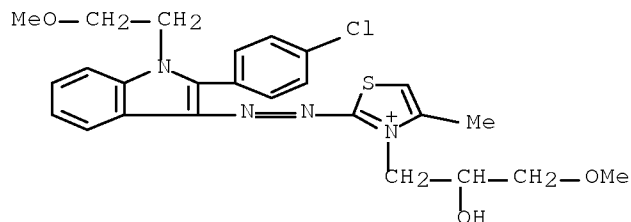
RN 35931-55-6 CAPLUS

CN Thiazolium, 2-[[2-(4-chlorophenyl)-1-(2-methoxyethyl)-1H-indol-3-yl]azo]-3-(2-hydroxy-3-methoxypropyl)-4-methyl-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47743-64-6

CMF C25 H28 Cl N4 O3 S

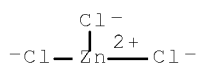


CM 2

CRN 23603-98-7

CMF C13 Zn

CCI CCS



L60 ANSWER 39 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1972:87129 CAPLUS Full-text
 DOCUMENT NUMBER: 76:87129
 ORIGINAL REFERENCE NO.: 76:14025a,14028a
 TITLE: Cationic azo dyes
 INVENTOR(S): Tanaka, Yoshio; Takeda, Yoshiro; Kinoshita, Tadao;
 Hirabayashi, Kazuyoshi
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.
 SOURCE: Ger. Offen., 20 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2114747	A	19711014	DE 1971-2114747	19710326 <--
FR 2083613	A5	19711217	FR 1971-10770	19710326 <--
FR 2083613	B1	19740322		
GB 1325623	A	19730808	GB 1971-25455	19710419 <--
PRIORITY APPLN. INFO.:			JP 1970-25677	A 19700326 <--

AB 2-(Indol-3-ylazo)thiazolium compds. (I, R = Me, Et, Ch₂CH₂CN; R₁ = Me, phenyl; R₂ = Me or H, R₃ = H or (R₂R₃) = benzo; X = ZnCl₃ or Cl) were prepared by quaternization of the corresponding thiazoles with diacetoneacrylamide (II). I were used for dyeing polyacrylonitrile fibers (Vonnell V or Kasimilon F) red shades. Thus, 2-(1-methyl-2-phenylindol-3-ylazo)thiazole and II were heated in HOAc at 90.deg.. HCl was added, HOAc removed after 2 hr, the mixture added to H₂O, and ZnCl₂ and NaCl were added to give cationic dye I (R = Me, R₁ = Ph, R₂ = R₃ = H, X = Cl) [34367-95-8]. Six other I were also prepared or used.

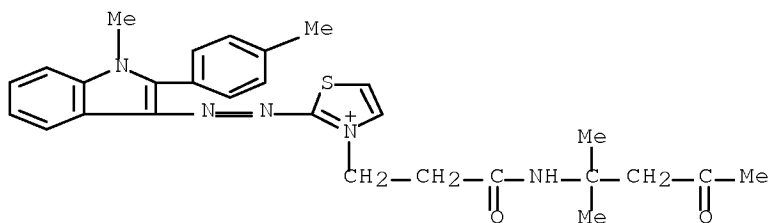
IC C09B
 CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 IT Dyes, azo
 ([[dimethyloxobutyl]carbamoyl]ethyl)(indolylazo)thiazolium compds., acrylic fibers)

IT 35718-60-6P 35718-61-7P 35835-52-0P
 35877-67-9P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

IT 35718-60-6P 35718-61-7P 35835-52-0P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

RN 35718-60-6 CAPLUS
 CN Thiazolium, 3-[3-[(1,1-dimethyl-3-oxobutyl)amino]-3-oxopropyl]-2-[[1-methyl-2-(4-methylphenyl)-1H-indol-3-yl]azo]-, trichlorozincate(1-) (9CI)
 (CA INDEX NAME)

CM 1
 CRN 50567-70-9
 CMF C28 H32 N5 O2 S

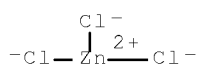


CM 2

CRN 23603-98-7

CMF C13 Zn

CCI CCS



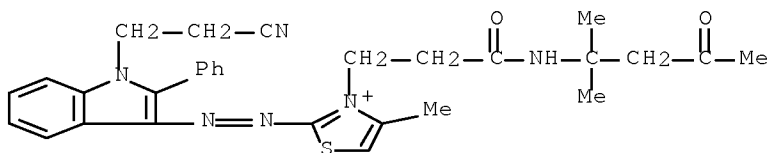
RN 35718-61-7 CAPLUS

CN Thiazolium, 2-[[1-(2-cyanoethyl)-2-phenyl-1H-indol-3-yl]azo]-3-[3-[(1,1-dimethyl-3-oxobutyl)amino]-3-oxopropyl]-4-methyl-, trichlorozincate(1-)
(9CI) (CA INDEX NAME)

CM 1

CRN 50568-11-1

CMF C30 H33 N6 O2 S

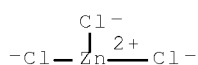


CM 2

CRN 23603-98-7

CMF C13 Zn

CCI CCS



RN 35835-52-0 CAPLUS

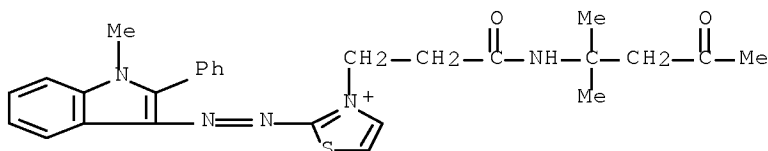
CN Thiazolium, 3-[3-[(1,1-dimethyl-3-oxobutyl)amino]-3-oxopropyl]-2-[(1-

methyl-2-phenyl-1H-indol-3-yl)azo]-, trichlorozincate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 50567-54-9

CMF C27 H30 N5 O2 S

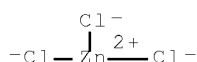


CM 2

CRN 23603-98-7

CMF Cl3 Zn

CCI CCS



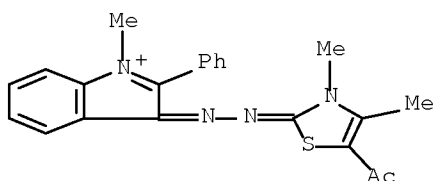
L60 ANSWER 40 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1965:403732 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 63:3732
 ORIGINAL REFERENCE NO.: 63:710h, 711a-b
 TITLE: Quaternary ammonium monoazo dye salts
 PATENT ASSIGNEE(S): American Cyanamid Co.
 SOURCE: 5 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 978287		19641223	GB 1962-42380	19621109 <--
PRIORITY APPLN. INFO.:			US	19611110 <--

GI For diagram(s), see printed CA Issue.

AB Cationic dye salts of the general formula I (R = Me or Et, X = an anion), dye anionic polymeric fibers a bright reddish-yellow shade with superior dyeing and fastness properties compared with 3-aminopyridine → 1-C10H7OH, quaternized with Et2SO4, described in Brit. 793,587 (CA 53, 20817i) and 2-aminopyridine → 2-C10H7OH, quaternized with Me2SO4, cf. Brit. 789,263 (CA 52, 11435a). Thus, 35 parts 3-aminopyridine was diazotized and coupled with 53 parts 2-C10H7OH to give 3-(2-hydroxy-1-naphthylazo)pyridine (II), which was recrystd. from iso-PrOH. A solution of 52 parts II in 700 parts PhMe was quaternized with 20 parts Me2SO4 to give I (R = Me, X = MeSO4), m. >300 (EtOH). Other I were also prepared, where R = Et and Me, and X = EtSO4 and ClO4, resp.

IC C09B
 CC 46 (Dyes)
 IT Dyes
 (azo, 1-alkyl-3-[(2-hydroxy-1-naphthyl)azo]pyridinium salts, polymeric
 fibers)
 IT 1533-68-2 31277-80-2 101404-70-0
 (Derived from data in the 7th Collective Formula Index (1962-1966))
 IT 101404-70-0
 (Derived from data in the 7th Collective Formula Index (1962-1966))
 RN 101404-70-0 CAPLUS
 CN 5-Acetyl-3,4-dimethyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium
 chloride (7CI) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 41 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1965:403731 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 63:3731
 ORIGINAL REFERENCE NO.: 63:710f-h
 TITLE: Azothiazole dyes
 INVENTOR(S): Leuchs, Dieter
 PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik A.-G.
 SOURCE: 7 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

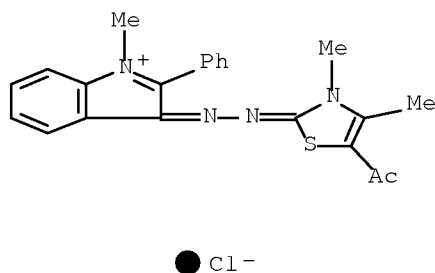
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1379349		19640120	FR	<--
BE 642006			BE	
DE 1218094			DE	
GB 1018458			GB	
NL 302826			NL	
PRIORITY APPLN. INFO.:			DE	19630103 <--

GI For diagram(s), see printed CA Issue.

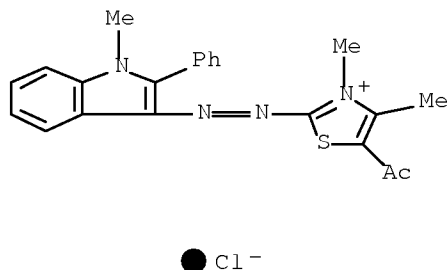
AB Compds. of the general formula I are prepared and give fast colors on polyacrylonitrile fibers (II). Thus, 189 parts Me₂SO₄ is added in 2 hrs. at 55° to 374 parts 4-methyl-5-acetyl-2-(1-methyl-2-phenyl-3-indolylazo)thiazole in 3500 parts CHCl₃, the mixture is refluxed 6-8 hrs., the CHCl₃ is distilled as 3500 parts H₂O is added, and the mixture is acidified hot with 1000 parts 10N HCl and treated with 1000 parts saturated NaCl to give 450 parts I (R = Me, R' = 1-methyl-2-phenyl-3-indolyl), bluish red on II. Similarly prepared are the following I (R = OEt) (R' and shade on II given): p-Me₂NC₆H₄, blue; cyano(1,3-dimethylbenzimidazolin-2-ylidene)methyl, reddish yellow.

IC C09B

CC 46 (Dyes)
 IT 1533-68-2 101404-70-0
 (Derived from data in the 7th Collective Formula Index (1962-1966))
 IT 1533-57-9P, Thiazolium, 5-acetyl-3,4-dimethyl-2-[(1-methyl-2-phenylindol-3-yl)azo]-, chloride 1533-66-0P, Thiazolium, 5-carboxy-2-[[cyano(1,3-dimethyl-2-benzimidazolinylidene)methyl]azo]-3,4-dimethyl-, chloride, ethyl ester 2005-05-2P, Thiazolium, 5-carboxy-2-[[p-(dimethylamino)phenyl]azo]-3,4-dimethyl-, chloride, ethyl ester 67772-89-8P, Cyclo(histidylthreonyl)
 RL: PREP (Preparation)
 (preparation of)
 IT 101404-70-0
 (Derived from data in the 7th Collective Formula Index (1962-1966))
 RN 101404-70-0 CAPLUS
 CN 5-Acetyl-3,4-dimethyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride (7CI) (CA INDEX NAME)



IT 1533-57-9P, Thiazolium, 5-acetyl-3,4-dimethyl-2-[(1-methyl-2-phenylindol-3-yl)azo]-, chloride
 RL: PREP (Preparation)
 (preparation of)
 RN 1533-57-9 CAPLUS
 CN Thiazolium, 5-acetyl-3,4-dimethyl-2-[(1-methyl-2-phenylindol-3-yl)azo]-, chloride (8CI) (CA INDEX NAME)



L60 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1964:477069 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 61:77069
 ORIGINAL REFERENCE NO.: 61:13457a-d
 TITLE: Cationic thiazolyl monoazo dyes
 INVENTOR(S): Iizuka, Masao; Yamamoto, Masao
 PATENT ASSIGNEE(S): Hodogaya Chemical Co.

SOURCE: 5 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3136751		19640609	US 1961-144826	19611013 <--
PRIORITY APPLN. INFO.:			JP	19601018 <--

GI For diagram(s), see printed CA Issue.

AB The title dyes for polyacrylonitrile fibers (I) have the general formula II or III, and are prepared by quaternization of the appropriate azo dye with CH₂:CHCONH₂ (IV) in the presence of an organic or inorg. protonic acid. Thus, a mixture of 2-aminothiazole → 1,2-dimethylindole 25.6, IV 35.5, and 35% HCl 12 in HOAc 200 parts is heated and stirred for one hr. at 95°, the HOAc distilled, and the residue dissolved in 5000 parts H₂O. Addition of 13.6 parts ZnCl₂ followed by NaCl to 12% ppts. the ZnCl₂ double salt of II (V = W = H, X = Y = Me, Z = Cl), orange on I. Similarly prepared are the ZnCl₂ double salts of the following II (V, W, X, Y, Z, and shade on I given): H, H, Ph, H, Cl, red; Me, Me, 4-MeOC₆H₄, Me, Br, bluish red; H, Me, Ph, Me, HCO₂, bluish red; H, H, Ph, Me, HCO₂, yellowish red; H, H, Ph, Et, 4-MeC₆H₄SO₃, yellowish red; H, CN, Me, Et, 4-MeC₆H₄SO₃, red; H, H, Ph, Ph, HSO₄, red; NO₂, H, Me, Et, Br, bluish red. Also prepared are the following III (V, W, X, Y, and shade on I given): MeO, Me, Et, HCO₂, bluish red; EtO, Ph, Et, 4-MeC₆H₄SO₃, reddish violet; H, 4-MeC₆H₄, Me, HSO₄, bluish red; MeO, Ph, Et, Br, red; Me, Ph, Et, Br, bluish red.

INCL 260158000

CC 46 (Dyes)

IT Dyes

(azo, 2-amino-5-nitrobenzonitrile N-(hydroxyalkyl)anilines, carbonic acid esters, cellulose acetate and nylon)

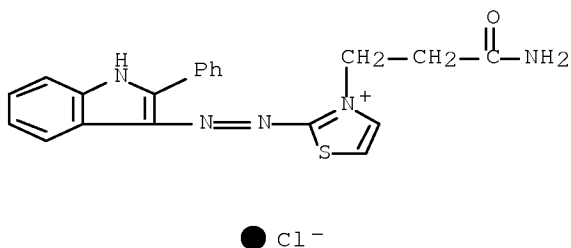
IT Dyes

(azo, thiazolium compds., polyacrylonitrile fibers)

IT 88893-62-3P, 3-(2-Carbamoylethyl)-2-[(2-phenylindol-3-yl)azo]thiazolium chloride 97597-84-7P, 3-(2-Carbamoylethyl)-2-[(1,2-dimethylindol-3-yl)azo]thiazolium chloride 98173-81-0P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-methylindol-3-yl)azo]-5-nitrothiazolium bromide 100336-08-1P, 3-(2-Carbamoylethyl)-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium formate 100659-87-8P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-methylindol-3-yl)azo]-6-methoxybenzothiazolium chloride 101037-83-6P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium formate 101521-97-5P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-methylindol-3-yl)azo]-6-methoxybenzothiazolium formate 101636-07-1P, 2,7-Naphthalenedisulfonic acid, 6-(2,3-dichloro-6-quinoxalinecarboxamido)-4-hydroxy-3-[(α-sulfo-p-tolyl)azo]-, trisodium salt 101656-86-4P, 3-(2-Carbamoylethyl)-4-cyano-2-[(1-ethyl-2-methylindol-3-yl)azo]thiazolium p-toluenesulfonate 101983-21-5P, 3-(2-Carbamoylethyl)-2-[[2-(p-methoxyphenyl)-1-methylindol-3-yl]azo]-4,5-dimethylthiazolium bromide 102032-39-3P, 3-(2-Carbamoylethyl)-2-[(1,2-diphenylindol-3-yl)azo]thiazolium hydrogen sulfate 103695-69-8P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]-6-methoxybenzothiazolium bromide 104424-61-5P, 3-(2-Carbamoylethyl)-2-[(1-methyl-2-p-tolylindol-3-yl)azo]benzothiazolium hydrogen sulfate 105841-53-0P, 3-(2-Carbamoylethyl)-6-ethoxy-2-[(1-ethyl-2-phenylindol-3-yl)azo]benzothiazolium p-toluenesulfonate 106766-05-6P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium p-toluenesulfonate 108041-14-1P, 3-(2-Carbamoylethyl)-2-[(1,2-diethylindol-3-yl)azo]-6-methylbenzothiazolium benzenesulfonate

RL: PREP (Preparation)
(preparation of)

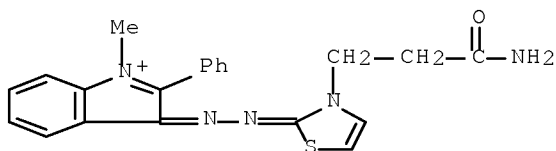
IT 88893-62-3P, 3-(2-Carbamoylethyl)-2-[(2-phenylindol-3-yl)azo]thiazolium chloride 100336-08-1P, 3-(2-Carbamoylethyl)-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium formate 101037-83-6P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium formate 101983-21-5P, 3-(2-Carbamoylethyl)-2-[[2-(p-methoxyphenyl)-1-methylindol-3-yl]azo]-4,5-dimethylthiazolium bromide 102032-39-3P, 3-(2-Carbamoylethyl)-2-[(1,2-diphenylindol-3-yl)azo]thiazolium hydrogen sulfate 106766-05-6P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium p-toluenesulfonate
RL: PREP (Preparation)
(preparation of)
RN 88893-62-3 CAPLUS
CN 3-(2-Carbamoylethyl)-2-[(2-phenylindol-3-yl)azo]thiazolium chloride (7CI)
(CA INDEX NAME)



RN 100336-08-1 CAPLUS
CN 3-(2-Carbamoylethyl)-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium formate (7CI) (CA INDEX NAME)

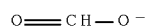
CM 1

CRN 100336-07-0
CMF C21 H20 N5 O S



CM 2

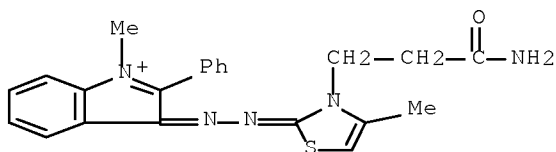
CRN 71-47-6
CMF C H O2



RN 101037-83-6 CAPLUS
 CN 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium formate (7CI) (CA INDEX NAME)

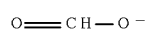
CM 1

CRN 101037-82-5
 CMF C22 H22 N5 O S

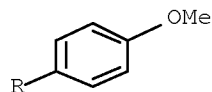
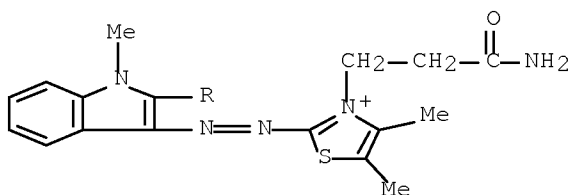


CM 2

CRN 71-47-6
 CMF C H O2



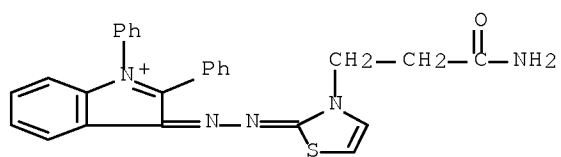
RN 101983-21-5 CAPLUS
 CN 3-(2-Carbamoylethyl)-2-[[2-(p-methoxyphenyl)-1-methylindol-3-yl]azo]-4,5-dimethylthiazolium bromide (7CI) (CA INDEX NAME)



RN 102032-39-3 CAPLUS
 CN 3-(2-Carbamoylethyl)-2-[(1,2-diphenylindol-3-yl)azo]thiazolium hydrogen sulfate (7CI) (CA INDEX NAME)

CM 1

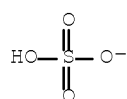
CRN 102032-38-2
 CMF C26 H22 N5 O S



CM 2

CRN 14996-02-2

CMF H O4 S



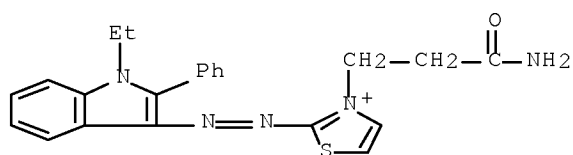
RN 106766-05-6 CAPLUS

CN 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium
p-toluenesulfonate (7CI) (CA INDEX NAME)

CM 1

CRN 106766-04-5

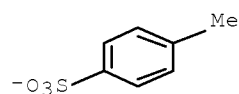
CMF C22 H22 N5 O S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



L60 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1964:425998 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 61:25998

ORIGINAL REFERENCE NO.: 61:4538f-g
 TITLE: Dyeing of fibers of polyacrylonitrile or its copolymers with other vinyl compounds
 INVENTOR(S): Pfitzner, Helmut; Baumann, Hans; Eisele, Julius; Federkiel, Wilhelm
 PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik A.-G.
 SOURCE: 2 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1163775		19640227	DE 1955-B67797	19550806 <--

PRIORITY APPLN. INFO.: DE 19550806 <--

GI For diagram(s), see printed CA Issue.

AB Basic azo dyes of the formula I are used, in which X is CH:CHS or C(Ph)C(NO₂)S and Z- is an anion. Thus, at 50°, 100 parts polyacrylonitrile fibers is put in a dye bath containing 4000 parts H₂O and 0.7 part I (X is a 1,3-thiadiazole residue and Z is Cl, and 5 parts 30% HOAc. During 30 min., the bath is heated to the b.p. After 90 min. at this temperature, the fibers are rinsed and dried.

IC D06F

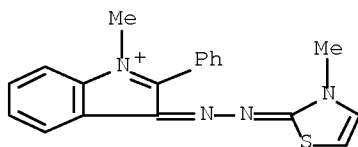
CC 47 (Textiles)

IT 98822-85-6, 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride 101920-11-0, 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]-5-nitro-4-phenylthiazolium methyl sulfate (acrylonitrile polymer dyeing with)

IT 98822-85-6, 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride 101920-11-0, 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]-5-nitro-4-phenylthiazolium methyl sulfate (acrylonitrile polymer dyeing with)

RN 98822-85-6 CAPLUS

CN 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride (6CI, 7CI) (CA INDEX NAME)



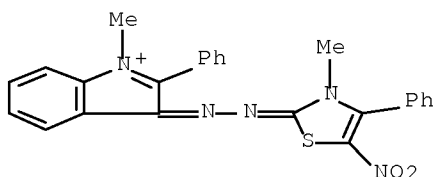
● Cl⁻

RN 101920-11-0 CAPLUS

CN 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]-5-nitro-4-phenylthiazolium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 101920-10-9
 CMF C25 H20 N5 O2 S



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me—O—SO₃⁻

L60 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1964:75801 CAPLUS Full-text

DOCUMENT NUMBER: 60:75801

ORIGINAL REFERENCE NO.: 60:13359b-c

TITLE: Monoazo dyes

PATENT ASSIGNEE(S): J. R. Geigy A.-G.

SOURCE: 16 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 626052		19630613	BE	<--
CH 393587			CH	
DE 1220062			DE	
GB 1005646			GB	
US 3143541		1964	US	<--
PRIORITY APPLN. INFO.:			CH	19611214 <--

GI For diagram(s), see printed CA Issue.

AB Compds. of the general formula I, where X and X' are H or SO₃H, R and R' are alkyl or aryl groups, dye polyamides from a neutral or slightly acid bath. Thus, 33.5 parts 4-tert-C₅H₁₁C₆H₄OC₆H₃(SO₃H)NH₂-4,2 was diazotized and coupled with 38.55 parts 8,2,6-HO[ClCH₂CON(iso-C₅H₁₁)]C₁₀H₅SO₃H in aqueous HCONH₂ to give a product which dyed wool scarlet from a weak AcOH solution. Similarly, other I were prepared [X, X', R, R', location of N(COCH₂Cl)R', and color on wool given]: H, SO₃H, tert-C₅H₁₁, PhCH₂, 2, scarlet; SO₃H, H, iso-C₈H₁₇, Me, 2, orange; SO₃H, H, tert-C₅H₁₁, PhCH₂, 3, orange.

CC 46 (Dyes)

IT Dyes

(azo, 4-hydroxy-3-[[o-(p-alkylphenoxy)phenyl]azo]-6(or 7)-(2-chloroacetamido)-2-naphthalenesulfonic acid, nylon and wool)

IT 12221-63-5P, Benzothiazolium, 3-(3-amino-3-oxopropyl)-2-[[1-methyl-2-(4-methylphenyl)-1H-indol-3-yl]azo]-, chloride 97734-17-3P, 2-Naphthalenesulfonic acid, 6-(N-benzyl-2-chloroacetamido)-4-hydroxy-3-[[2-(p-tert-pentylphenoxy)-4-sulfophenyl]azo]- 97734-18-4P, 2-Naphthalenesulfonic acid, 7-(N-benzyl-2-chloroacetamido)-4-hydroxy-3-[[2-

(p-tert-pentylphenoxy)-5-sulfophenyl]azo]- 101919-00-0P,
 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium
 chloride 103695-70-1P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-
 yl)azo]-6-methoxybenzothiazolium chloride 104269-07-0P,
 2-Naphthalenesulfonic acid, 6-(2-chloro-N-methylacetamido)-4-hydroxy-3-[[2-
 (p-isooctylphenoxy)-5-sulfophenyl]azo]- 856583-01-2P,
 2-Naphthalenesulfonic acid, 6-(2-chloro-N-isopentylacetamido)-4-hydroxy-3-
 [[2-(p-tert-pentylphenoxy)-5-sulfophenyl]azo]-

RL: PREP (Preparation)

(preparation of)

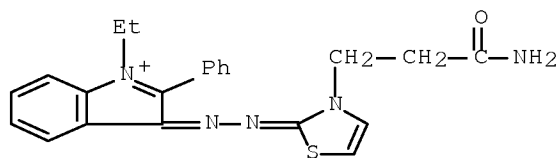
IT 101919-00-0P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-
 yl)azo]thiazolium chloride

RL: PREP (Preparation)

(preparation of)

RN 101919-00-0 CAPLUS

CN 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium
 chloride (7CI) (CA INDEX NAME)



● Cl⁻

L60 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1964:75800 CAPLUS Full-text

DOCUMENT NUMBER: 60:75800

ORIGINAL REFERENCE NO.: 60:13359a-b

TITLE: Basic monoazo dyes for polyacrylonitrile fibers

INVENTOR(S): Suzuki, Mitsuo; Lizuka, Masao; Yamamoto, Masao

PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd.

SOURCE: 4 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38010737	B4	19630629	JP	19601018 <--
PRIORITY APPLN. INFO.:			JP	19601018 <--

AB By using the procedure of Japan. 6286('63), VI-HCl was treated with III to give VII. Similarly prepared were other dyes (same data and shade given): IV, Me, Ph, Me, bluish red; IV, Et, Ph, H, yellowish red; V, Me, p-tolyl, H, bluish red; V, Et, Ph, MeO, bluish red.

CC 46 (Dyes)

IT 12221-63-5P, Benzothiazolium, 3-(3-amino-3-oxopropyl)-2-[[1-methyl-2-(4-methylphenyl)-1H-indol-3-yl]azo]-, chloride 97597-84-7P,
 3-(2-Carbamoylethyl)-2-[(1,2-dimethylindol-3-yl)azo]thiazolium chloride
 99813-66-8P, 3-(2-Carbamoylethyl)-4-cyano-2-[(1-ethyl-2-methylindol-3-yl)azo]thiazolium chloride 101521-84-0P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-p-tolylindol-3-yl)azo]thiazolium chloride

101676-32-8P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride 101919-00-0P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium chloride 103695-70-1P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]-6-methoxybenzothiazolium chloride 105069-50-9P, 3-(2-Carbamoylethyl)-2-[(1,2-dimethylindol-3-yl)azo]-6-methylbenzothiazolium chloride 107175-87-1P, Benzothiazolium, 3-(3-amino-3-oxopropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride

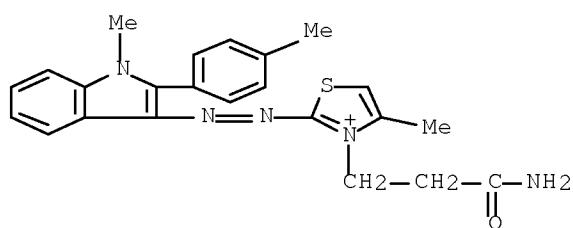
RL: PREP (Preparation)
(preparation of)

IT 101521-84-0P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-p-tolylindol-3-yl)azo]thiazolium chloride 101676-32-8P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride 101919-00-0P, 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium chloride

RL: PREP (Preparation)
(preparation of)

RN 101521-84-0 CAPLUS

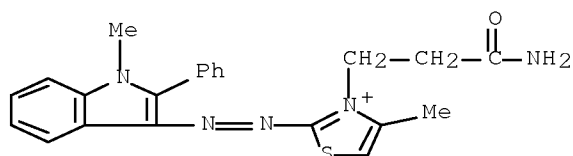
CN 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-p-tolylindol-3-yl)azo]thiazolium chloride (7CI) (CA INDEX NAME)



● Cl⁻

RN 101676-32-8 CAPLUS

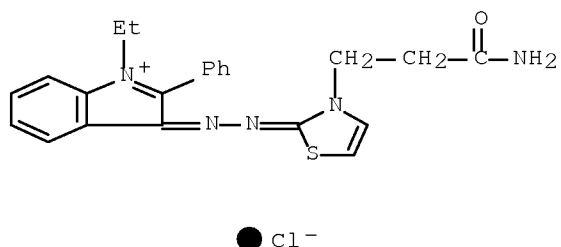
CN 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride (7CI) (CA INDEX NAME)



● Cl⁻

RN 101919-00-0 CAPLUS

CN 3-(2-Carbamoylethyl)-2-[(1-ethyl-2-phenylindol-3-yl)azo]thiazolium chloride (7CI) (CA INDEX NAME)



L60 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1964:75799 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 60:75799
 ORIGINAL REFERENCE NO.: 60:13358h,13359a
 TITLE: Basic monoazo dyes for polyacrylonitrile fibers
 INVENTOR(S): Suzuki, Mitsuo; Lizuka, Masao; Yamamoto, Masao
 PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd.
 SOURCE: 4 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38010736	B4	19630629	JP	19601004 <--

PRIORITY APPLN. INFO.: JP 19601004 <--

AB Dyes of formula IV and V are prepared Thus, a mixture of 1,2-dimethyl-3-(2-thiazolylazo)indole (VI) 25.6, BrCH₂CH₂CONH₂ 29, and HOCH₂CH₂OH 10 is heated at 110° for 3 hrs., poured into warm H₂O 1500, ZnCl₂ 14 parts added, and NaCl added to precipitate IV (R₁ = R₂ = Me, R₃ = H) (VII), orange in H₂O and bright orange on polyacrylonitrile. Similarly prepared are bluish red dyes (R₁, R₂, and R₃ given): IV, Me, p-tolyl, Me; IV, Et, Me, CN; V, Me, Ph, H; V, Me, Me, Me.

CC 46 (Dyes)

IT Dyes
 (azo, 1-alkyl-2-alkyl(or aryl)indole 2-amino-3-(2-carbamoylethyl)thiazolium(or benzothiazolium) compds., acrylonitrile polymers)

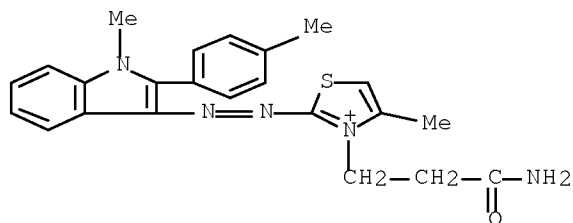
IT 97597-84-7P, 3-(2-Carbamoylethyl)-2-[(1,2-dimethylindol-3-yl)azo]thiazolium chloride 98109-05-8P, 2-[(4-Amino-m-tolyl)azo]-3-(2-carbamoylethyl)chlorobenzothiazolium chloride 99813-66-8P, 3-(2-Carbamoylethyl)-4-cyano-2-[(1-ethyl-2-methylindol-3-yl)azo]thiazolium chloride 101521-84-0P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-p-tolylindol-3-yl)azo]thiazolium chloride 101676-32-8P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride 105069-50-9P, 3-(2-Carbamoylethyl)-2-[(1,2-dimethylindol-3-yl)azo]-6-methylbenzothiazolium chloride 107175-87-1P, Benzothiazolium, 3-(3-amino-3-oxopropyl)-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride
 RL: PREP (Preparation)
 (preparation of)

IT 101521-84-0P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-p-tolylindol-3-yl)azo]thiazolium chloride 101676-32-8P, 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride
 RL: PREP (Preparation)

(preparation of)

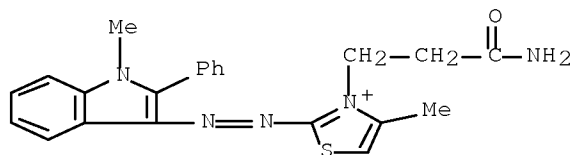
RN 101521-84-0 CAPLUS

CN 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-p-tolyllindol-3-yl)azo]thiazolium chloride (7CI) (CA INDEX NAME)

● Cl⁻

RN 101676-32-8 CAPLUS

CN 3-(2-Carbamoylethyl)-4-methyl-2-[(1-methyl-2-phenyllindol-3-yl)azo]thiazolium chloride (7CI) (CA INDEX NAME)

● Cl⁻

L60 ANSWER 47 OF 47 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1960:65472 CAPLUS

DOCUMENT NUMBER: 54:65472

ORIGINAL REFERENCE NO.: 54:12603f-i,12604a-c

TITLE: Dyes for dyeing and printing fiber mixtures which contain fibers containing acrylonitrile

INVENTOR(S): Mueller, Roland; Eisele, Julius

PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik Akt.-Ges.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 2922690		19600126	US 1957-653542	19570418 <--
GB 853985			GB	

AB Saltlike dyes were prepared from cationic (basic) dyes and anionic (acid) dyes, which were suitable for dyeing and printing fiber mixts. containing fibers of polyacrylonitrile or of copolymers of acrylonitrile. and fibers capable of being dyed with anionic dyes from a single dyebath. The cationic dye 2-(4-dimethylaminophenylazo)-6-methoxy-3-methylbenzothiazolium chloride (I) 5 and the anionic dye, the mono-Na salt of 3-substituted 1-methyl-2-

phenylindole, where the 3-substituent is [4-[3,4-SO₃-(EtO)C₆H₃NH]C₆H₄]2C⁺, (II) 5 (both powdered), mixed with the condensation product (IIa) 10 parts derived from 2 mole 2-C₁₀H₇SO₃Na and 1 mole CH₂O, the mixture made into a paste with H₂O 20-40 parts, the paste dried, and ground in a ball mill gave a blue dispersion dye, dyeing fiber mixts. of fiber containing acrylonitrile and fibers capable of being dyed with anionic dyes with excellent fastness properties. Similarly were prepared the following dispersion dyes (components and color of dye given): 2-(1-methyl-2-phenyl-3-indolylazo)-3-methylthiazolium chloride (III) and the 1:1 Cr complex of 4-(2-hydroxy-5-methyl-3-nitrophenylazo)-3-phenyl-1- (2-sulfophenyl)-5-pyrazolone (IV), red; 2-(1,3-dimethyl-2- benzimidazolinyldenemethylazo)-3-methylbenzothiazolium methosulfate (V) and the 1:1 Cr complex of 3-methyl-4-[3-(3-carboxy-2-hydroxy-5- sulfophenylsulfamoyl)phenylazo]-5-pyrazolone (VI), yellow; 2-[2-(1,2,3,4-tetrahydro-9-carbazolyl)vinyl]-1,3,3-trimethyl-3H-indazolium chloride (VII) and VI, yellow; (by precipitation) VII and the 1:1 Cr complex of 1-phenyl-4-(2-carboxyphenylazo)-5-pyrazolone and 2,5-HO(PhNH₂SO₂)C₆H₃CO₂H, yellow; V and 1-(2-chloro-5-sulfophenyl)-3-methyl-4-(2-benzoylsulfamoyl- phenylazo)-5-pyrazolone, yellow; III and 7-amino-8-(2- benzoylsulfamoylphenylazo)-1-naphthol-3-sulfonic acid, red; III and the 1:2 Cr complex of 4-(2-hydroxy-5-methyl-4-sulfamoylphenylazo)-3-methyl-1- phenyl-5-pyrazolone, red; I and 4-(2,5-disulfophenylazo)-7-sulfo-4'-(8- hydroxy-4-phenylamino-6-sulfo-1-naphthylazo)-1,1'-azonaphthalene, blue; 4-(4-NO₂C₆H₄N:N)C₆H₄N(Me)CH₂CH(OH)CH₂NMe₃+Cl⁻ and IV, red. Spirit Blue (C.I. 689) and II or Orange II (C.I. 151), -; V and 2-[4-(4- acetylacetamido-2-methoxyphenylazo)-3-sulfophenyl]-5-methyl-7- sulfobenzothiazole, -. Into a dyebath of the dye salt 1 from I and II mixed with the condensation product 1 (from 2-HO₃SC₁₀H₇ 10 and HCHO 1) and 85% HCO₂H 4 in H₂O 5000 parts was introduced at 50° a fabric 100 of polyacrylonitrile fibers 50 and wool 50, the bath heated to 100°, dyeing continued 90 min. at 100°, and the fabric rinsed and dried to give powerful dyeings of excellent fastness on both kinds of fibers. Other fiber mixts. may be dyed similarly. The dyes may also be prepared without the dispersing agent IIa.

CC 25 (Dyes and Textiles)

IT Dyes

(anionic and cationic, for mixts. containing acrylonitrile polymer fibers)

IT 98822-85-6P, 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride

RL: PREP (Preparation)

(preparation of)

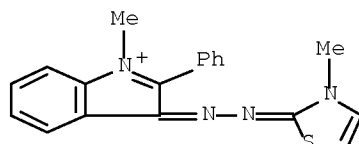
IT 98822-85-6P, 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride

RL: PREP (Preparation)

(preparation of)

RN 98822-85-6 CAPLUS

CN 3-Methyl-2-[(1-methyl-2-phenylindol-3-yl)azo]thiazolium chloride (6CI, 7CI) (CA INDEX NAME)



● Cl⁻

REFERENCES FOR SINGLE RN THAT WAS PREVIOUSLY REMOVED FROM ANSWER SET

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 DICTIONARY FILE UPDATES: 26 AUG 2008 HIGHEST RN 1043895-06-2

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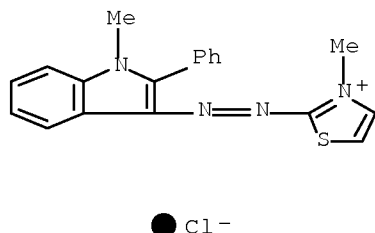
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 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6

=> d ide l18 REGISTRY RECORD/STRUCTURE FOR THIS COMPOUND

L18 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 42373-04-6 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Thiazolium, 3-methyl-2-[2-(1-methyl-2-phenyl-1H-indol-3-yl)diazenyl]-,
 chloride (1:1) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Thiazolium, 3-methyl-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride
 (9CI)
 OTHER NAMES:
 CN Basacryl Red GL
 CN Basic Red 29
 CN C.I. 11460
 CN C.I. Basic Red 29
 CN Cationic Red 2GL
 CN Kayacryl Red GL
 CN Kayacryl Red GL-ED
 CN Viocryl Red AGL
 CN Viocryl Red AGL 300
 DR 11075-22-2, 121181-49-5, 68893-90-3
 MF C19 H17 N4 S . Cl
 LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, CSNB,
 IFICDB, IFIPAT, IFIUDB, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 CRN (761340-85-6)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

74 REFERENCES IN FILE CA (1907 TO DATE)
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 74 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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 FILE LAST UPDATED: 26 Aug 2008 (20080826/ED)

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<http://www.cas.org/legal/infopolicy.html>
 'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> => d que nos 144; d que nos 145; d que nos 146
 L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6
 L32 74 SEA FILE=CAPLUS ABB=ON L18
 L44 2 SEA FILE=CAPLUS ABB=ON L32(L)COS/RL COS=COSMETIC USE

L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6
 L32 74 SEA FILE=CAPLUS ABB=ON L18
 L40 52378 SEA FILE=CAPLUS ABB=ON HAIR/OBI
 L41 8184 SEA FILE=CAPLUS ABB=ON KERATIN/OBI
 L45 3 SEA FILE=CAPLUS ABB=ON L32 AND (L40 OR L41)

L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6
 L32 74 SEA FILE=CAPLUS ABB=ON L18
 L43 146292 SEA FILE=CAPLUS ABB=ON 62/SC,SX SECTION CODE 62=ESSENTIAL OILS
 AND COSMETICS
 L46 2 SEA FILE=CAPLUS ABB=ON L43 AND L32

=> s 144,145,146 not 160

L64 2 (L44 OR L45 OR L46) NOT L60 L60 WAS PREVIOUSLY PRINTED

=> d ibib abs hitind 1-2

L64 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1256245 CAPLUS Full-text

DOCUMENT NUMBER: 146:49738

TITLE: Hair dye composition comprising a derivative
 of diamino-N,N-dihydropyrazolone, a coupler, and a
 heterocyclic direct dye

INVENTOR(S): Hercouet, Leila

PATENT ASSIGNEE(S): L'Oreal, Fr.

SOURCE: Fr. Demande, 78pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2886132	A1	20061201	FR 2005-51446	20050531
FR 2886132	B1	20070720		
EP 1733715	A1	20061220	EP 2006-114655	20060529
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
MX 2006PA06112	A	20061129	MX 2006-PA6112	20060530
KR 2006125557	A	20061206	KR 2006-48943	20060530
KR 793651	B1	20080110		
US 20070006398	A1	20070111	US 2006-442967	20060531
BR 2006003101	A	20070221	BR 2006-3101	20060531
CN 1915214	A	20070221	CN 2006-10106081	20060531
IN 2006MU00860	A	20080808	IN 2006-MU860	20060602
PRIORITY APPLN. INFO.:			FR 2005-51446	A 20050531
			US 2005-690148P	P 20050614

OTHER SOURCE(S): CASREACT 146:49738; MARPAT 146:49738

AB A composition for the dyeing of keratinous fibers, and in particular of human keratinous fibers such as the hair, comprises at least a diamino-N,N-dihydropyrazolone-type oxidation base, or its addition salts, a coupler, and a heterocyclic direct dye. The presents invention makes it possible to dye hair which is resistant to light and washing. Thus, 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one dihydrochloride (I) was prepared by reduction of 3-(benzylamino)-2-nitro-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one with

palladium over carbon under hydrogen and reaction with hydrochloric acid.
Formulation of hair dye containing I 1x10⁻³, 5,6-dihydroxyindole hydrobromide 1x10⁻³, and a direct dye 1x10⁻² mol% is disclosed.

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 27

ST hair dye diaminodihydropyrazolone deriv coupler heterocyclic direct dye

IT Hair dyes

(hair dye composition comprising derivative of diaminodihydropyrazolone, coupler, and heterocyclic direct dye)

IT 61-73-4, Basic blue 9 81-88-9, Basic violet 10 90-15-3, α -Naphthol 91-56-5, 2,3-Indolinedione 95-88-5 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 130-20-1, Vat blue 6 477-73-6, Basic red 2 517-28-2, Hematoxylin 518-47-8, Acid yellow 73 533-31-3, Sesamol 591-27-5 608-25-3 860-22-0, Acid blue 74 966-62-1, Basic blue 6 989-38-8, Basic red 1 1324-04-5, Acid yellow 5 1934-21-0, Acid yellow 23 2380-86-1, 1H-Indol-6-ol 2380-94-1, 1H-Indol-4-ol 2390-63-8, Basic violet 11 2835-95-2 3520-42-1, Acid red 52 6232-60-6 6359-97-3 7469-77-4, 2-Methyl-1-Naphthol 7556-37-8 8004-92-0, Acid yellow 3 8005-88-7, C.I. Acid Black 70 8064-60-6, Direct yellow 59 12217-48-0, Basic red 14 12217-50-4, Basic yellow 13 12220-24-5, Acid red 195 12221-39-5 12221-52-2, Basic red 22 12221-69-1, Basic red 46 12222-60-5, Direct yellow 106 12270-13-2, Basic blue 41 12270-25-6, Basic red 51 12768-82-0, Basic orange 15 13103-75-8 16423-68-0, Acid red 51 16867-03-1 17372-87-1, Acid red 87 18472-87-2, Acid red 92 25711-72-2 26021-57-8 26455-21-0 33239-19-9, Acid red 95 41959-35-7 42373-04-6, Basic red 29 52256-37-8 54060-92-3, Basic yellow 28 55302-96-0 61901-58-4, C.I. Basic Orange 17 61901-61-9, Basic orange 31 67297-27-2, Disperse yellow 184 68134-38-3, Basic yellow 29 68391-31-1, Basic yellow 57 69825-83-8 70185-38-5 70643-19-5 77484-79-8 81329-90-0 81892-72-0 83763-47-7 84540-50-1 85679-78-3 96024-06-5, C.I. Basic Orange 16 116844-55-4, Basic yellow 87 122196-48-9 122196-54-7 149330-25-6 916217-20-4 916217-22-6 916217-47-5 916217-50-0

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dye composition comprising derivative of diaminodihydropyrazolone, coupler, and heterocyclic direct dye)

IT 857035-79-1P 857035-82-6P 857035-86-0P 857035-90-6P 857035-95-1P 857035-97-3P 916146-90-2P 916146-92-4P 916146-93-5P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hair dye composition comprising derivative of diaminodihydropyrazolone, coupler, and heterocyclic direct dye)

IT 64-20-0, Tetramethylammonium bromide 75-04-7, Ethylamine, reactions 75-31-0, Isopropylamine, reactions 100-46-9, Benzylamine, reactions 110-52-1, 1,4-Dibromobutane 123-75-1, Pyrrolidine, reactions 124-63-0, Mesyl chloride 141-82-2, Malonic acid, reactions 627-18-9 7699-31-2 16466-61-8 104599-36-2 767270-33-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(hair dye composition comprising derivative of diaminodihydropyrazolone, coupler, and heterocyclic direct dye)

IT 69386-74-9P 124072-89-5P 197304-94-2P 340256-13-5P 358360-19-7P 452082-34-7P 452082-38-1P 857035-80-4P 857035-81-5P 857035-83-7P 857035-84-8P 857035-85-9P 857035-87-1P 857035-88-2P 857035-89-3P 857035-91-7P 857035-92-8P 857035-93-9P 857035-96-2P 857035-98-4P 916146-91-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(hair dye composition comprising derivative of

diaminodihydropyrazolone, coupler, and heterocyclic direct dye)
 IT 10025-87-3, Trichlorophosphine oxide
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (hair dye composition comprising derivative of
 diaminodihydropyrazolone, coupler, and heterocyclic direct dye)
 REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:721567 CAPLUS Full-text
 DOCUMENT NUMBER: 130:4809
 TITLE: Dyeing melamine fibers and their blends for dyed
 fabrics having chambray appearance
 INVENTOR(S): Gadoury, Dean R.
 PATENT ASSIGNEE(S): BASF Corporation, USA
 SOURCE: Eur. Pat. Appl., 25 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 875620	A1	19981104	EP 1998-107062	19980417
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2232255	A1	19981024	CA 1998-2232255	19980423
CN 1199118	A	19981118	CN 1998-109779	19980424
JP 10317286	A	19981202	JP 1998-115703	19980424
PRIORITY APPLN. INFO.:			US 1997-845523	A 19970424

AB Melamine fibers, used alone or with other types of fibers, are (mock)dyed
 using ≥ 1 dyestuffs selected from direct dyes; nonmetalized acid dyes;
 metalized acid dyes; disperse dyes without carriers; and their blends.
 IC ICM D06P003-82
 ICS D06P001-00; D06P003-00
 CC 40-6 (Textiles and Fibers)
 IT Hair
 (mohair, melamine fiber blend; dyeing of melamine fibers and their
 blends for fabrics having chambray appearance)
 IT 42373-04-6, C.I. Basic Red 29
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Basacryl Red GL; dyeing of melamine fibers and their blends for
 fabrics having chambray appearance)
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d que nos 149; d que nos 151

L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6
 L32 74 SEA FILE=CAPLUS ABB=ON L18
 L33 43 SEA FILE=CAPLUS ABB=ON L32 AND PATENT/DT
 L34 31 SEA FILE=CAPLUS ABB=ON L32 NOT L33
 L36 28 SEA FILE=CAPLUS ABB=ON L34 AND PY<2005
 L37 41 SEA FILE=CAPLUS ABB=ON L33 AND (PD<20041126 OR AD<20041126 OR
 PRD<20041126)
 L38 69 SEA FILE=CAPLUS ABB=ON (L36 OR L37)
 L47 136522 SEA FILE=CAPLUS ABB=ON DYE#/CW
 L49 41 SEA FILE=CAPLUS ABB=ON L47 AND L38

L18 1 SEA FILE=REGISTRY ABB=ON 42373-04-6
 L32 74 SEA FILE=CAPLUS ABB=ON L18
 L33 43 SEA FILE=CAPLUS ABB=ON L32 AND PATENT/DT
 L34 31 SEA FILE=CAPLUS ABB=ON L32 NOT L33
 L36 28 SEA FILE=CAPLUS ABB=ON L34 AND PY<2005
 L37 41 SEA FILE=CAPLUS ABB=ON L33 AND (PD<20041126 OR AD<20041126 OR
 PRD<20041126)
 L38 69 SEA FILE=CAPLUS ABB=ON (L36 OR L37)
 L50 64030 SEA FILE=CAPLUS ABB=ON 41/SC,SX SECTION CODE 41=Dyes, Organic
 Pigments, Fluorescent Brighteners, and Photographic Sensitizers
 L51 18 SEA FILE=CAPLUS ABB=ON L38 AND L50

=> s (149 and 151) not 160,164

L65 11 (L49 AND L51) NOT (L60 OR L64) L60,L64 WERE PREVIOUSLY PRINTED

=> d ibib abs hitind 1-11

L65 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:278438 CAPLUS Full-text
 DOCUMENT NUMBER: 145:84912
 TITLE: Novel and environment-friendly method for
 quaternization of cationic dye parent substance with
 high conversion rate
 INVENTOR(S): Wang, Yidan; Yu, Bohong; Wang, Xusheng
 PATENT ASSIGNEE(S): Shanghai Waysmos Fine Chemical Co., Ltd., Peop. Rep.
 China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
CN 1743383	A	20060308	CN 2004-10054168	20040901 <--
PRIORITY APPLN. INFO.:			CN 2004-10054168	20040901 <--
OTHER SOURCE(S):	CASREACT 145:84912			

AB The title method comprises (1) adding an acid binder in cationic dye parent
 substance solution under stirring, wherein the acid binder is selected from
 ethylamine, diethylamine, triethylamine, trimethylamine, N-
 ethyldiisopropylamine, dicyclohexylethylamine or saturated alkyl substituted
 amine; (2) heating to 20-120 °C, adding a quaternization agent selected from
 dialkyl sulfate, benzene sulfonate, halogenated aromatic hydrocarbon,
 halogenated alkane or strong inorg. acid ester, and refluxing for 0.5-10 h,
 wherein the molar ratio of the acid binder to the quaternization agent is
 1:(0.2-2), and the molar ratio of the quaternization agent to the parent
 substance is 1:(1-5); and (3) removing the solvent by distillation The
 cationic dye parent substance is that of cationic basic blue 41, cationic
 golden yellow X-GL, basic red 29, cationic basic red 22 and cationic basic
 violet 18. The method has the advantages of high conversion rate, no inorg.
 salt in parent substance, recoverability of solvent and no environmental
 pollution.

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and
 Photographic Sensitizers)

IT Dyes
 (cationic; production of cationic dyes by quaternization of their parent

compsd.)
 IT 42373-04-6P, C.I. Basic Red 29
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (C.I. 11460; production of cationic dyes by quaternization of their parent
 compds.)

L65 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:493657 CAPLUS Full-text
 DOCUMENT NUMBER: 143:45047
 TITLE: Method of making a pigment composition containing
 hybridized ultramarine pigment
 INVENTOR(S): Thamby, Subramaniam Balasubaramaniam Kathirgamathamby;
 Calvert, David John
 PATENT ASSIGNEE(S): Holliday Pigments Limited, UK
 SOURCE: PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005052069	A2	20050609	WO 2004-GB4506	20041025 <--
WO 2005052069	A3	20050804		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1678260	A2	20060712	EP 2004-769014	20041025 <--
EP 1678260	B1	20071212		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
AT 380848	T	20071215	AT 2004-769014	20041025 <--
PRIORITY APPLN. INFO.:			GB 2003-25475	A 20031031 <--
			WO 2004-GB4506	W 20041025 <--

AB The present invention relates to a method of making a pigment composition, comprising the step of making a pigment selected from: (i) a ferrocyanide derivative substituted with one or more cationic dye groups in the presence of a suspension of a zeolite pigment in an acidified solution; and (ii) a derivative of a complex acid selected from the group consisting of silicomolybdate, phosphomolybdate, phosphotungstate, phosphotungstomolybdate and mixts. thereof substituted with one or more cationic dye groups, in the presence of a suspension of a zeolite pigment in an acidified solution

IC ICM C09C001-26

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 41

IT Dyes

(cationic; production of pigment composition containing hybridized ultramarine pigment)

IT 61-73-4, Basic Blue 9 81-88-9, Basic Violet 10 115-77-5D,
 Pentaerythritol, polymers 532-82-1 548-62-9, Basic Violet 3

569-64-2, Basic Green 4 632-99-5, Basic Violet 14 633-03-4, Basic Green 1 2185-86-6, Basic Blue 11 2465-27-2, Basic Yellow 2 2580-56-5, Basic Blue 26 3056-93-7, Basic Orange 21 3068-39-1, Basic Red 1:1 3521-06-0 3648-36-0, Basic Red 13 4208-80-4, Basic Yellow 11 6358-36-7 6359-45-1, Basic Violet 16 6441-73-2, Basic Yellow 5 8005-77-4, Basic Brown 1 8005-78-5, Basic Brown 4 11121-25-8, Silicomolybdate 12217-48-0, Basic Red 14 12217-50-4, Basic Yellow 13 12221-52-2, Basic Red 22 12221-69-1, Basic Red 46 12221-78-2, C.I. Basic Yellow 30 12270-13-2, Basic Blue 41 12270-25-6, Basic Red 51 12768-85-3, Basic Yellow 19 15000-59-6, Basic Blue 54 15085-91-3, Basic Blue 162 25198-22-5, Basic Red 18 42373-04-6, Basic Red 29 52435-14-0, Basic Yellow 24 54060-92-3, Basic Yellow 28 55840-82-9, Basic Blue 3 56646-84-5, Victoria Blue 68134-38-3, Basic Yellow 29 72968-14-0, C.I. Basic Red 11 83949-75-1, Basic Yellow 51 849677-31-2, Pentalyne K 1626 853176-28-0, C.I. Basic Violet 53 853176-36-0, C.I. Basic Red 7 853176-37-1, C.I. Basic Orange 59

RL: TEM (Technical or engineered material use); USES (Uses)

(production of pigment composition containing hybridized ultramarine pigment)

L65 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:899813 CAPLUS Full-text

DOCUMENT NUMBER: 140:341141

TITLE: Phase behavior of the perfluoropolyether microemulsions in supercritical CO₂ and their use for the solubilization of ionic dyes

AUTHOR(S): Sawada, K.; Jun, J. H.; Ueda, M.

CORPORATE SOURCE: Department of Chemistry and Material Technology, Kyoto Institute of Technology, Matsugasaki, Sakyo-ku, Kyoto, 606-8585, Japan

SOURCE: Dyes and Pigments (2004), 60(3), 197-203

CODEN: DYPIDX; ISSN: 0143-7208

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Phase behavior of a perfluoropolyether surfactant microemulsion in supercrit. CO₂ and the solubilization of conventional ionic dyes in the same system have been investigated using perfluoro 2,5,8,11-tetramethyl- 3,6,9,12-tetraoxapentadecanoic acid ammonium salt as the surfactant. We found that the surfactant prepared in this study was satisfactorily dissolved in supercrit. CO₂ without the presence of an entrainer. Moreover dissolved surfactant had an ability to form micellar aggregates and to incorporate a small amount of water in the interior of the aggregates. We also found that conventional ionic dyes such as acid, reactive, and basic dyes were solubilized in the microemulsion system in supercrit. CO₂.

CC 46-3 (Surface Active Agents and Detergents)

Section cross-reference(s): 40, 41

IT Dyes

(ionic; phase behavior of perfluoropolyether microemulsions in supercrit. CO₂ and their use for solubilization of)

IT 2611-80-5, C.I. Acid Red 82 3520-42-1, C.I. Acid Red 52 6416-66-6, C.I. Acid Red 249 23211-47-4, C.I. Reactive Red 3 42373-04-6, C.I. Basic Red 29

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(red dye; phase behavior of perfluoropolyether microemulsions in supercrit. CO₂ and their use for solubilization of ionic dyes)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:902184 CAPLUS Full-text

DOCUMENT NUMBER: 136:358966

TITLE: Reuse of activated sludge biomass: I. Removal of basic dyes from wastewater by biomass

AUTHOR(S): Chu, H. C.; Chen, K. M.

CORPORATE SOURCE: Department of Textile and Polymer Engineering,
National Taiwan University of Science and Technology,
Taipei, 106, Taiwan

SOURCE: Process Biochemistry (Oxford, United Kingdom) (
2002), 37(6), 595-600

CODEN: PBCHE5; ISSN: 1359-5113

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Basic dye removal from wastewater was studied using activated sludge biomass as an adsorbent. Exptl. results of COD removal (%) showed that for various basic dyes, biomass adsorption was feasible and effective. Adsorption kinetics followed first-order processes, controlled by film diffusion. Adsorption capacity was affected by several factors, including chemical structure, basicity, and mol. weight of basic dye mols. Temperature effect on adsorption of Basic Violet 3 were studied; adsorption capacity decreased with increasing temperature. The process was exothermic in nature, with an activation energy of 3.27 kcal/mol.

CC 60-3 (Waste Treatment and Disposal)
Section cross-reference(s): 10, 40, 41, 67

IT Dyes
(basic; dye chemical structure, basicity, and mol. weight and temperature effect on

waste activated sludge biomass adsorption of basic dyes in textile wastewater)

IT 548-62-9, Basic Violet 3 12217-43-5, Basic Blue 47 14097-03-1, Basic Red 18 15000-59-6, Basic Blue 54 42373-04-6, Basic Red 29 52435-14-0, Basic Yellow 24 55840-82-9, Basic Blue 3

RL: PEP (Physical, engineering or chemical process); POL (Pollutant); PYP (Physical process); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)

(dye chemical structure, basicity, and mol. weight and temperature effect on waste

activated sludge biomass adsorption of basic dyes in textile wastewater)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:65068 CAPLUS Full-text

DOCUMENT NUMBER: 134:226652

TITLE: Comparison of dye-wastewater treatment with three-dimensional activated carbon fiber electrode method and Fenton reagent method

AUTHOR(S): Shen, Zhe-min; Jia, Jin-ping; Xu, Xiang-rong; Wang, Wen-hua

CORPORATE SOURCE: School of Environmental Sci. and Eng., Shanghai Jiaotong Univ., Shanghai, 200240, Peop. Rep. China

SOURCE: Shanghai Jiaotong Daxue Xuebao (2000), 34(11), 1531-1534

CODEN: SCTPDH; ISSN: 0253-9942

PUBLISHER: Shanghai Jiaotong Daxue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The treatment effect of dye-wastewater with 3-dimensional activated C fiber (ACF) electrode and Fenton reagent was studied. Almost all kinds of dye solution are decolorized in the ACF process. TOC removal from vat dye and direct dye solns. is higher than that of others. In the Fenton process, the reaction varies greatly with the dye of different type and chemical structures.

CC 60-2 (Waste Treatment and Disposal)
Section cross-reference(s): 41

IT Dyes
(comparison of dye-wastewater treatment with three-dimensional activated carbon fiber electrode method and Fenton reagent method)

IT Dyes
(direct; comparison of dye-wastewater treatment with three-dimensional activated carbon fiber electrode method and Fenton reagent method)

IT 81-77-6, Reduced Blue RSN 116-71-2 482-89-3 1324-55-6 1327-73-7, C.I. Sulphur Green 3 1328-25-2, C.I. Vat Black 9 1658-56-6, Acid Red G 2586-60-9, Direct Violet R 3626-28-6 3626-36-6 4474-24-2 12218-95-0, Neutral grey 2bl 12236-85-0, Reactive Emerald Blue K-GL 12270-17-6, C.I. Basic Blue 79 13324-20-4, Reactive brilliant blue x-br 17418-58-5 42373-04-6, Cationic red 2gl 52591-25-0 55840-82-9, C.I. Basic Blue 3 75214-66-3, Reactive violet k-3r 120583-34-8, Reactive brilliant red k-2g 147444-92-6, Reactive light yellow k-4g 162615-36-3, Acid dark blue ggr 163442-06-6, Acid Lake Blue 207868-90-4, Acid blue bga 207869-12-3, Glauco Sulfur Black BN 220750-90-3, Reactive brilliant red km-8b
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(comparison of dye-wastewater treatment with three-dimensional activated carbon fiber electrode method and Fenton reagent method)

L65 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:82751 CAPLUS Full-text

DOCUMENT NUMBER: 130:200352

TITLE: Technical note treatment of dyeing wastewater with ACF electrodes

AUTHOR(S): Jia, Jinping; Yang, Ji; Liao, Jun; Wang, Wenghua; Wang, Zijian

CORPORATE SOURCE: Department of Applied Chemistry, Shanghai Jiao Tong University, Shanghai, 200240, Peop. Rep. China

SOURCE: Water Research (1998), Volume Date 1999, 33(3), 881-884

CODEN: WATRAG; ISSN: 0043-1354

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Activated carbon fiber (ACF) was used as electrodes to treat several simulated dyeing wastewater and factual textile-dyeing wastewater from a textile-dyeing operation in Shanghai. This method was effective and highly competitive in contrast with Fenton's reagent. Several operating variables, such as voltage, pH and salt added were studied to ascertain their effect on the treatment efficacy. Nearly all the wastewater chromaticity removals were >90%, with COD removals of 40-80%.

CC 60-2 (Waste Treatment and Disposal)

Section cross-reference(s): 41

IT Dyes
(tech. note treatment of dyeing wastewater with activated carbon fiber electrodes)

IT 81-77-6, Vat blue RSN 129-17-9, Acid Turquoise Blue V 482-89-3, Vat dark blue VB 1324-55-6, Vat Brilliant Violet RR 1327-73-7, Sulfur Brilliant Green GB 1328-25-2, Vat Direct Black RB 3567-69-9, Acid red

B 3626-28-6, Direct green B 4474-24-2, Weak acid brilliant blue RAW
 12218-95-0, Neutral Gray 2BL 12226-48-1, Reactive Flavine K 4G
 12236-85-0, Reactive Turquoise Blue K-GL 13324-20-4, Reactive brilliant
 blue x-br 15000-59-6, Cationic Brilliant Blue 2RL 42373-04-6,
 Cationic red 2GL 52591-25-0, Vat Red F 3B 55840-82-9, Cationic
 Turquoise X-GB 207868-90-4, Acid blue BGA 207869-12-3, Glauco Sulfur
 Black BN 207869-49-6, Weak Acid Deep Blue GR 220750-90-3, Reactive
 Brilliant Red KM 8B

RL: REM (Removal or disposal); PROC (Process)

(tech. note treatment of dyeing wastewater with activated carbon fiber
 electrodes)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:131096 CAPLUS Full-text

DOCUMENT NUMBER: 126:267932

ORIGINAL REFERENCE NO.: 126:51793a,51796a

TITLE: TiO₂/UV photodegradation of azo dyes in aqueous
 solutions

AUTHOR(S): Tang, W. Z.; Zhang, Z.; An, H.; Quintana, M. O.;
 Torres, D. F.

CORPORATE SOURCE: Dep. Civil Environ. Eng., Florida Int. Univ., Miami,
 FL, 33199, USA

SOURCE: Environmental Technology (1997), 18(1), 1-12
 CODEN: ENVTEV; ISSN: 0959-3330

PUBLISHER: Selper

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Photocatalytic degradation kinetics of eleven azo dyes by TiO₂/UV was studied
 using a Rayonet photoreactor. The degradation kinetics of azo dyes seems to
 be significantly influenced by their elec. nature, the number of azo bonds
 present in a dye mol., and type of auxiliary groups attached to the azo bond.
 For example, trisazo dyes were the most difficult to degrade, and monoazo dyes
 were the most readily degradable, while the disazo dyes were in the middle
 range. The exptl. results indicate that pos. hole oxidation is the dominant
 mechanism contributing to the degradation of neutral or neg. charged dyes at
 pH 3. The degradation kinetics of pos. charged basic dyes may be through
 reduction by electrons in the conduction bands of the excited TiO₂ particles.
 On the other hand, hydroxyl radicals should be the major oxidation species at
 pH greater than 7. The pH effects on the degradation kinetics of different
 dyes may be due to the intrinsic reactivities of the neutral and ionized dye
 species at various pH levels towards pos. hole oxidation or hydroxyl radical
 attack.

CC 60-2 (Waste Treatment and Disposal)
 Section cross-reference(s): 41

IT Azo dyes
 (TiO₂/UV photodegrdn. of azo dyes in aqueous solns.)

IT 3861-73-2, Acid blue 92 4399-55-7, Direct blue 71 4787-93-3, Acid red
 8 5489-77-0 5850-86-2, Acid orange 8 6359-85-9, Acid yellow 25
 10169-02-5, Acid red 97 12270-13-2, Basic blue 41 12392-64-2, Acid
 blue 161 13390-47-1, Acid yellow 38 42373-04-6, Basic red 29

RL: REM (Removal or disposal); PROC (Process)

(TiO₂/UV photodegrdn. of azo dyes in aqueous solns.)

L65 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:291825 CAPLUS Full-text

DOCUMENT NUMBER: 120:291825

ORIGINAL REFERENCE NO.: 120:51279a,51282a

TITLE: Genotoxicity of chemical synthetic dyes. Results of

umu test using *Salmonella typhimurium* TA1535/pSK1002
 AUTHOR(S): Nakamura, S.; Kosaka, H.; Ugawa, M.
 CORPORATE SOURCE: Osaka Prefect. Inst. Public Health, Osaka, 537, Japan
 SOURCE: Hen'igensei Shiken (1993), 2(3), 162-74
 CODEN: HESHEI; ISSN: 0917-5768

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The genotoxicity of 241 synthetic dyes was investigated using umu test using *Salmonella typhimurium* TA1535/pSK 1002. The samples showing β -galactosidase activity more than 1.5 fold over the background level were defined as genotoxic. A clear dose-response relation was observed between the dose and umu gene expression was observed in case of 20 dyes.

CC 4-6 (Toxicology)
 Section cross-reference(s): 41

IT Dyes

Dyes, reactive
 (genotoxicity of)

IT Dyes

(acid, genotoxicity of)

IT Dyes

(basic, genotoxicity of)

IT Dyes

(direct, genotoxicity of)

IT Dyes

(disperse, genotoxicity of)

IT 992-59-6, c.i. Direct red 2 1324-53-4, c.i. Acid blue 138 1324-58-9, c.i. Direct blue 108 1325-54-8, c.i. Direct orange 39 1937-34-4, c.i. Direct red 79 2580-78-1, c.i. Reactive blue 19 2666-17-3, c.i. Acid blue 41 2744-49-2, c.i. Fluorescent brightening agent 121 2870-32-8, c.i. Direct yellow 12 2945-96-2, c.i. Direct black 17 3056-93-7, c.i. Basic orange 21 3271-05-4, c.i. Fluorescent brightening agent 162 3351-05-1, c.i. Acid blue 113 3426-43-5, c.i. Fluorescent brightening agent 90 3626-41-3, c.i. Acid brown 2 3648-36-0, c.i. Basic red 13 3818-60-8, c.i. Direct blue 168 3827-17-6, c.i. Fluorescent brightener 234 3861-73-2, c.i. Acid blue 92 4208-80-4, c.i. Basic yellow 11 4368-56-3, c.i. Acid blue 62 4430-16-4, c.i. Acid green 41 4657-00-5, c.i. Basic orange 22 5001-72-9, c.i. Direct red 31 5124-25-4, c.i. Disperse yellow 42 6104-58-1, c.i. Acid blue 90 6104-59-2, c.i. Acid blue 83 6262-07-3, c.i. Acid black 26 6300-37-4, c.i. Disperse yellow 7 6358-57-2, c.i. Acid red 111 6359-45-1, c.i. Basic violet 16 6359-50-8, c.i. Basic yellow 21 6359-98-4, c.i. Acid yellow 17 6373-79-1, c.i. Acid brown 13 6397-02-0, c.i. Acid blue 129 6408-63-5, c.i. Acid violet 34 6424-85-7, c.i. Acid blue 40 6441-82-3, c.i. Basic violet 7 6459-94-5, c.i. Acid red 114 6470-20-8, c.i. Acid orange 56 6471-01-8, c.i. Acid blue 127 6798-03-4, c.i. Direct violet 66 8003-88-1, c.i. Acid orange 51 11129-26-3, c.i. Direct green 63 12217-15-1, c.i. Acid black 50 12217-18-4, c.i. Acid black 109 12217-29-7, c.i. Acid green 28 12217-36-6, c.i. Acid red 257 12217-42-4, c.i. Basic blue 45 12217-43-5, c.i. Basic blue 47 12217-48-0, c.i. Basic red 14 12217-50-4, c.i. Basic yellow 13 12217-52-6, c.i. Direct black 112 12217-57-1, c.i. Direct blue 200 12217-67-3, c.i. Direct red 89 12217-71-9, c.i. Direct yellow 39 12217-80-0, c.i. Disperse blue 60 12218-97-2, c.i. Acid black 110 12219-10-2, C.I. Acid Black 156 12219-19-1, c.i. Acid blue 112 12219-21-5, c.i. Acid blue 140 12219-25-9, c.i. Acid blue 175 12219-87-3, c.i. Acid green 40 12220-06-3, c.i. Acid orange 67 12220-21-2, c.i. Acid red 129 12220-46-1, c.i. Acid red 335 12220-51-8, c.i. Acid violet 48 12220-74-5, c.i. Acid yellow 110 12221-31-7, c.i. Basic blue 57 12221-37-3, c.i. Basic blue 65 12221-38-4, c.i. Basic blue 66 12221-39-5, c.i. Basic blue 67

12221-43-1, c.i. Basic blue 75 12221-52-2, c.i. Basic red 22
 12221-53-3, c.i. Basic red 27 12221-60-2, c.i. Basic red 36
 12221-62-4, c.i. Basic red 38 12221-69-1, c.i. Basic red 46
 12221-73-7, c.i. Basic violet 27 12221-83-9, c.i. Basic yellow 36
 12221-86-2, c.i. Basic yellow 40 12221-90-8, c.i. Direct black 117
 12221-92-0, c.i. Direct black 132 12222-13-8, c.i. Direct blue 248
 12222-29-6, c.i. Direct brown 210 12222-48-9, c.i. Direct red 224
 12222-49-0, c.i. Direct red 225 12222-50-3, c.i. Direct red 226
 12223-75-5, C.I. Disperse Violet 36 12224-01-0, c.i. Fluorescent
 brightening agent 22 12224-02-1, c.i. Fluorescent brightening agent 24
 12224-05-4, c.i. Fluorescent brightening agent 84 12224-07-6, c.i.
 Fluorescent brightening agent 86 12224-18-9, c.i. Fluorescent
 brightening agent 153 12224-29-2, c.i. Fluorescent brightening agent 166
 12224-32-7, c.i. Fluorescent brightening agent 169 12225-39-7, c.i.
 Reactive blue 15 12225-83-1, c.i. Reactive orange 7 12234-64-9, c.i.
 Acid blue 185 12235-49-3, c.i. Basic blue 73 12235-53-9, c.i. Basic
 orange 38 12235-54-0, c.i. Basic red 44 12235-55-1, c.i. Basic violet
 30 12235-56-2, c.i. Basic violet 31 12236-42-9, c.i. Fluorescent
 brightening agent 176 12236-86-1, c.i. Reactive blue 21 12239-11-1,
 c.i. Acid red 336 12239-15-5, c.i. Acid yellow 49 12270-13-2, c.i.
 Basic blue 41 12270-15-4, c.i. Basic blue 77 12270-16-5, c.i. Basic
 blue 78 12270-19-8, c.i. Basic orange 40 12270-23-4, c.i. Basic red 49
 12270-30-3, c.i. Basic violet 35 12270-42-7, c.i. Disperse yellow 104
 12768-80-8, c.i. Basic blue 40 12768-81-9, c.i. Basic blue 42
 12768-85-3, c.i. Basic yellow 19 12768-91-1, c.i. Fluorescent brightener
 87 12769-07-2, c.i. Reactive red 23 12769-08-3, c.i. Reactive violet 4
 12769-09-4, c.i. Reactive yellow 13 13390-47-1, c.i. Acid yellow 38
 13418-49-0, c.i. Disperse blue 87 14097-03-1, c.i. Basic red 18
 15000-59-6, c.i. Basic blue 54 15792-43-5, c.i. Acid red 138
 16090-02-1, c.i. Fluorescent brightener 260 16586-42-8, c.i. Disperse
 violet 52 16889-10-4, c.i. Disperse red 73 17095-24-8, c.i. Reactive
 black 5 17464-91-4, c.i. Disperse brown 1:1 17958-73-5, c.i.
 Fluorescent brightening agent 85 18976-74-4, c.i. Reactive yellow 14
 19526-81-9, c.i. Reactive red 22 20262-58-2, c.i. Reactive orange 16
 25510-81-0, c.i. Disperse red 145 28950-66-5, c.i. Fluorescent
 brightening agent 104 37216-10-7, c.i. Basic red 24 37372-89-7, c.i.
 Basic blue 105 39393-38-9, c.i. Basic red 16 40690-89-9, c.i. Disperse
 orange 73 40691-09-6, c.i. Fluorescent brightener 54 41025-67-6, c.i.
 Basic yellow 25 42373-04-6, c.i. Basic red 29 50662-99-2, c.i.
 Reactive yellow 2 52435-14-0, c.i. Basic yellow 24 52584-47-1, c.i.
 Acid yellow 72 54060-92-3, c.i. Basic yellow 28 54392-43-7, c.i. Basic
 red 23 54392-44-8, c.i. Basic red 25 55777-80-5, c.i. Basic yellow 49
 55798-23-7, c.i. Basic yellow 23 55840-82-9, c.i. Basic blue 3
 57741-47-6, c.i. Acid red 266 58052-00-9, c.i. Reactive blue 100
 59141-95-6, c.i. Reactive red 112 60800-55-7, c.i. Direct blue 201
 61373-76-0, c.i. Fluorescent brightener 118 61725-17-5, c.i. Fluorescent
 brightener 37 61847-54-9, c.i. Basic red 60 61847-56-1, c.i. Basic
 orange 47 61847-58-3, c.i. Basic brown 14 61901-44-8, c.i. Acid red
 276 61901-64-2, c.i. Basic violet 15 61931-18-8, c.i. Acid red 274
 64104-47-8, c.i. Fluorescent brightener 223 64181-81-3, c.i. Reactive
 red 43 68134-38-3, c.i. Basic yellow 29 68893-92-5, c.i. Basic yellow
 67 70210-06-9, c.i. Acid red 119 70210-20-7, c.i. Reactive red 24
 70210-21-8, c.i. Reactive orange 5 70210-46-7, c.i. Reactive red 45
 70294-20-1, c.i. Reactive yellow 116 70563-36-9, c.i. Direct yellow 87
 71033-12-0, c.i. Basic orange 30 71767-66-3, c.i. Disperse red 143
 71819-45-9, c.i. Fluorescent brightener 21 71838-79-4, c.i. Basic red 69
 71872-40-7, c.i. Direct brown 195 71873-63-7, c.i. Direct blue 90
 71902-15-3, c.i. Reactive orange 72 72146-79-3, c.i. Basic blue 93
 72414-07-4, c.i. Fluorescent brightener 217 72927-99-2, c.i. Reactive
 blue 49 75757-60-7, c.i. Reactive blue 147 76930-14-8, c.i. Direct

brown 223 78564-86-0, c.i. Disperse red 152 78564-87-1, c.i. Disperse red 153 80802-82-0, c.i. Basic yellow 73 80802-87-5, c.i. Fluorescent brightener 14 80892-58-6, c.i. Disperse red 164 82469-75-8, c.i. Direct yellow 130 85854-36-0, c.i. Reactive yellow 77 86438-39-3, c.i. Fluorescent brightener 226 86543-85-3, c.i. Direct red 243 87501-32-4, c.i. Disperse yellow 164 88232-20-6, c.i. Reactive red 111 88232-21-7, c.i. Reactive yellow 76 88385-25-5, c.i. Reactive blue 148 88650-91-3, c.i. Disperse blue 146 88650-92-4, c.i. Disperse blue 158 90249-26-6, c.i. Direct blue 202 90880-77-6, c.i. Direct red 83:1 96024-05-4, c.i. Acid red 143:1 97502-60-8, c.i. Direct blue 203 104981-56-8, c.i. Acid orange 149 106254-34-6, c.i. Direct blue 237 107397-15-9, c.i. Basic red 82 111940-94-4, c.i. Direct green 80 118548-22-4, c.i. Disperse red 157 120946-99-8, c.i. Basic blue 129 129069-21-2, c.i. Reactive red 110 129069-22-3, c.i. Reactive yellow 75 131640-49-8, c.i. Reactive orange 56 131640-50-1, c.i. Reactive orange 57 133354-27-5, c.i. Reactive red 114 145992-03-6, c.i. Acid violet 97 150315-57-4, c.i. Fluorescent brightener 73 154608-57-8, C.I. Reactive Violet 22 154999-54-9, C.I. Acid Yellow 142 154999-55-0, C.I. Basic Red 70 154999-56-1, C.I. Basic Red 295 154999-57-2, C.I. Basic Violet 41 154999-58-3, C.I. Basic Yellow 43 154999-59-4, C.I. Fluorescent Brightener 214 154999-60-7, C.I. Fluorescent Brightener 219 154999-61-8, C.I. Fluorescent Brightener 224 154999-62-9, C.I. Fluorescent Brightener 239 154999-63-0, C.I. Fluorescent Brightener 242 154999-64-1, C.I. Fluorescent Brightener 262 154999-65-2, C.I. Reactive Blue 101 154999-66-3, C.I. Reactive Brown 21 154999-67-4, C.I. Reactive Red 108 154999-68-5, C.I. Reactive Red 109 154999-69-6, C.I. Reactive Red 113 154999-70-9, C.I. Reactive Yellow 79

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (genotoxicity of)

L65 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:90587 CAPLUS Full-text

DOCUMENT NUMBER: 116:90587

ORIGINAL REFERENCE NO.: 116:15257a,15260a

TITLE: Elimination of textile dyes from aqueous solutions by isothermal adsorption at 25°

AUTHOR(S): Dosen-Sver, Dubravka; Cetina, Mario; Bach-Dragutinovic, Biserka

CORPORATE SOURCE: Inst. Tekst. Odjecu, Tehnol. Fak., Zagreb, Yugoslavia

SOURCE: Tekstil (1991), 40(4), 157-61
CODEN: TEKTA6; ISSN: 0492-5882

DOCUMENT TYPE: Journal

LANGUAGE: Serbo-Croatian

AB Isothermal adsorption of organic textile dyes from wastewater by natural adsorbents with high SiO₂ content was studied at 25°. Solarrot B, Basacrylrot GL, and Lanasyneinrot 2BL were treated with kaolinite and 2 natural aluminosilicate mixts. containing 34.52 and 31.25% SiO₂. The natural aluminosilicates with higher amorphous SiO₂ gave good results, while kaolinite was not a good adsorbent for those dyes.

CC 60-3 (Waste Treatment and Disposal)
Section cross-reference(s): 40, 41

IT Dyes
(organic, removal of, from wastewater, by isothermal adsorption on kaolinite and aluminosilicates)

IT 2610-11-9 ~~42373-04-6~~ 139046-34-7, Lanasyne Pure Red 2BL

RL: REM (Removal or disposal); PROC (Process)

(removal of, from textile dyeing wastewater, by isothermal adsorption with kaolinite and aluminosilicates)

L65 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:230667 CAPLUS Full-text

DOCUMENT NUMBER: 114:230667

ORIGINAL REFERENCE NO.: 114:38915a,38918a

TITLE: Freeze concentration of dyes

AUTHOR(S): Yang, Yiqi; Ladisch, Christine M.; Ladisch, Michael R.

CORPORATE SOURCE: Purdue Univ., West Lafayette, IN, 47907, USA

SOURCE: Textile Research Journal (1990), 60(12),
744-53

CODEN: TRJOA9; ISSN: 0040-5175

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Concentration of water-soluble direct, acid, basic, and reactive azo dyes occurs when dilute solns. are frozen at a temperature below the m.p. and above the eutectic point of the solution. When freezing is done in still solution, a concentration of $\leq 500\%$ is achieved in 1 step, with the dye solution collecting in an oblatelately spheroidal liquid pocket surrounded by clear ice containing voids, formed from air pockets, radiating outward. Three repetitive freezing cycles concentrate the dye 13,000%. The higher the water solubility of the dye, the lower the ability to concentrate during freezing. The freezing rate of 4 acid and direct dyes had no close relation with the size of the dyes studied. Over a larger mol. weight range, an effect was observed for other kinds of mols. Freeze concentration of NaCl solution (mol. weight 58.5) gives almost a 700% concentration, detergent solution (SDS, mol. weight 288.4) gives 400%, and bovine serum albumin (mol. weight 66,200), 160%. A theory is presented suggesting that the concentration effect and the formation of the central sphere are consistent with minimizing of the free energy of the overall system. This simple technique may find application in the concentration of heat-sensitive, labile dyes for anal. purposes, as well as in the recovery of dyes and other chems. on a bench scale.

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

IT Dyes

Dyes, azo

(freeze concentration of aqueous)

IT 50-99-7, D-Glucose, uses and miscellaneous 151-21-3, SDS, uses and miscellaneous 547-58-0, C.I. Acid Orange 52 587-98-4, C.I. Acid Yellow 36 1330-38-7, C.I. Direct Blue 86 2610-10-8, C.I. Direct Red 80 2610-11-9, C.I. Direct Red 81 6358-57-2, C.I. Acid Red 111 6388-26-7, C.I. Direct Green 26 6406-56-0, C.I. Acid Red 151 7647-14-5, Sodium chloride, uses and miscellaneous 8014-91-3, C.I. Direct Brown 74 12715-61-6, C.I. Acid Yellow 151 13324-20-4, C.I. Reactive Blue 4 15000-59-6, C.I. Basic Blue 54 42373-04-6, C.I. Basic Red 29 70616-89-6, C.I. Reactive Orange 13

RL: USES (Uses)

(freeze concentration of aqueous)

L65 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:51644 CAPLUS Full-text

DOCUMENT NUMBER: 106:51644

ORIGINAL REFERENCE NO.: 106:8553a,8556a

TITLE: Basic dye complex compositions

INVENTOR(S): Abe, Masayuki; Matsuyama, Shigeharu; Izumi, Kaoru

PATENT ASSIGNEE(S): Kao Corp., Japan; Nippon Kayaku Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61044957	A	19860304	JP 1984-166780	19840809 <--
PRIORITY APPLN. INFO.:			JP 1984-166780	19840809 <--

AB The title compns. showing excellent buildup properties contain basic dye complexes with styrenesulfonic acid polymers, which also act as dispersants. Thus, 670 parts C.I. Basic Yellow 67 wet cake (268 parts dye) was slurried with 100 parts water, stirred with 3315 parts 20% aqueous poly(Na styrenesulfonate) (mol. weight 50,000) at 60-65° for 3 h, treated with 81 parts Na₂SO₄, and spray-dried to give a yellow dye composition Acrylic fiber (100 parts) was immersed in a bath from the above composition 2, AcOH 1, and warm water 5000 parts at 60° for 30 min, and dyed at 98-100° for 60 min to give a level dyeing. No foaming occurred, and residual dye in the bath was 3%, compared with 9% when Na naphthalenesulfonate-HCHO condensate was used in place of poly(Na styrenesulfonate).

IC ICM C09B069-06

CC 40-6 (Textiles and Fibers)

Section cross-reference(s): 41

IT Dyes
(basic, polystyrenesulfonic acid complexes, with improved buildup properties and dispersibility)

IT 569-64-2D, C.I. Basic Green 4, styrenesulfonic acid polymer complexes 12221-43-1D, styrenesulfonic acid polymer complexes 12221-53-3D, styrenesulfonic acid polymer complexes 12221-69-1D, styrenesulfonic acid polymer complexes 12221-86-2D, styrenesulfonic acid polymer complexes 12270-15-4D, styrenesulfonic acid polymer complexes 14097-03-1D, C.I. Basic Red 18, styrenesulfonic acid polymer complexes 15000-59-6D, C.I. Basic Blue 54, styrenesulfonic acid polymer complexes 42373-04-6D, C.I. Basic Red 29, styrenesulfonic acid polymer complexes 52435-14-0D, C.I. Basic Yellow 24, styrenesulfonic acid polymer complexes 54060-92-3D, C.I. Basic Yellow 28, styrenesulfonic acid polymer complexes 68893-92-5D, styrenesulfonic acid polymer complexes 83949-75-1D, styrenesulfonic acid polymer complexes

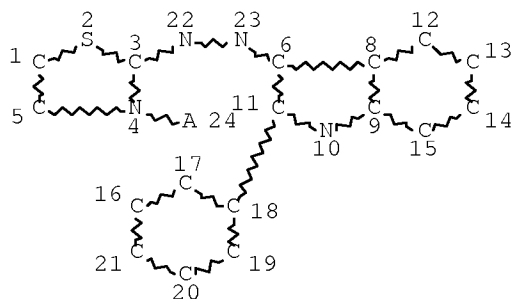
RL: USES (Uses)
(dye, with improved buildup properties and dispersibility)

=> fil hom

FILE 'HOME' ENTERED AT 12:04:28 ON 27 AUG 2008

SEARCH HISTORY

=> d stat que l24; d his nofile
L9 STR



NODE ATTRIBUTES:

NSPEC IS RC AT 24
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

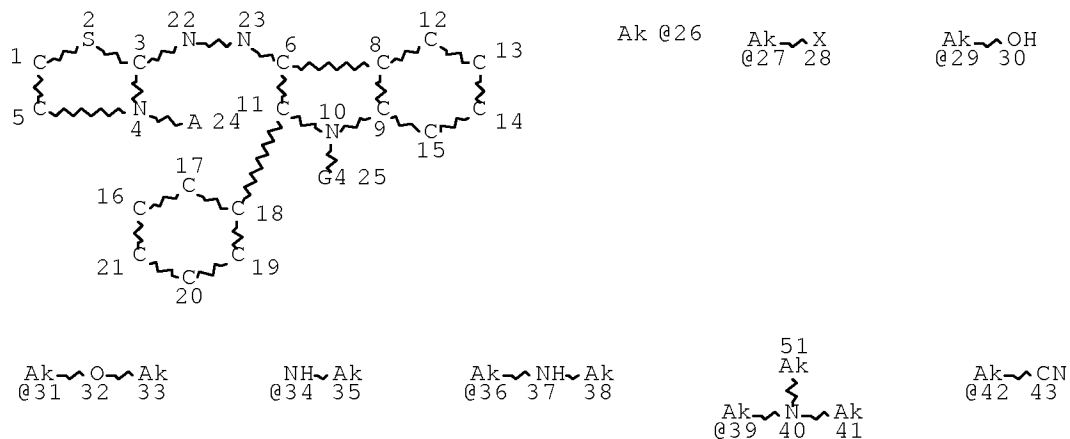
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 23

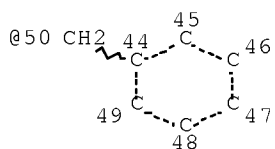
STEREO ATTRIBUTES: NONE

L16 278 SEA FILE=REGISTRY SSS FUL L9

L21 STR



Page 1-A



Page 2-A

VAR G4=H/26/27/29/31/34/36/39/42/CY/50

NODE ATTRIBUTES:

NSPEC IS RC AT 24
 CONNECT IS E1 RC AT 26
 CONNECT IS E1 RC AT 33
 CONNECT IS E1 RC AT 35
 CONNECT IS E1 RC AT 38
 CONNECT IS E1 RC AT 41
 CONNECT IS E1 RC AT 51
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 3
 NUMBER OF NODES IS 50

STEREO ATTRIBUTES: NONE

L24 202 SEA FILE=REGISTRY SUB=L16 SSS FUL L21

100.0% PROCESSED 278 ITERATIONS

202 ANSWERS

SEARCH TIME: 00.00.01

(FILE 'HOME' ENTERED AT 11:27:35 ON 27 AUG 2008)

FILE 'CAPLUS' ENTERED AT 11:27:45 ON 27 AUG 2008

L1 392 SEA ABB=ON PASQUIER C?/AU
 L2 10 SEA ABB=ON BUCLIN V?/AU
 L3 9 SEA ABB=ON L1 AND L2
 D SCAN TI
 L4 2 SEA ABB=ON AZO/TI AND L3
 D SCAN
 SEL RN

FILE 'REGISTRY' ENTERED AT 11:28:57 ON 27 AUG 2008

L5 60 SEA ABB=ON (862998-76-3/BI OR 862998-80-9/BI OR 862998-84-3/BI
 OR 862998-92-3/BI OR 25442-24-4/BI OR 42373-04-6/BI OR
 7722-84-1/BI OR 862998-71-8/BI OR 862998-72-9/BI OR 862998-73-0
 /BI OR 862998-74-1/BI OR 862998-77-4/BI OR 862998-78-5/BI OR
 862998-81-0/BI OR 862998-82-1/BI OR 862998-85-4/BI OR 862998-86
 -5/BI OR 862998-88-7/BI OR 862998-89-8/BI OR 862998-90-1/BI OR
 862998-93-4/BI OR 862998-94-5/BI OR 862998-95-6/BI OR 862998-96
 -7/BI OR 862998-97-8/BI OR 862998-99-0/BI OR 862999-00-6/BI OR
 862999-01-7/BI OR 862999-03-9/BI OR 862999-04-0/BI OR 862999-05
 -1/BI OR 862999-07-3/BI OR 862999-08-4/BI OR 862999-09-5/BI OR
 862999-11-9/BI OR 862999-12-0/BI OR 862999-13-1/BI OR 862999-15
 -3/BI OR 862999-16-4/BI OR 862999-17-5/BI OR 862999-19-7/BI OR
 862999-20-0/BI OR 862999-21-1/BI OR 862999-23-3/BI OR 862999-24
 -4/BI OR 862999-25-5/BI OR 862999-27-7/BI OR 862999-28-8/BI OR
 862999-29-9/BI OR 862999-31-3/BI OR 862999-32-4/BI OR 862999-33
 -5/BI OR 862999-35-7/BI OR 862999-36-8/BI OR 862999-37-9/BI OR
 862999-39-1/BI OR 863494-62-6/BI OR 863494-64-8/BI OR 863494-66
 -0/BI OR 863494-68-2/BI)
 D SCAN
 L6 STR
 L7 19 SEA SSS SAM L6

FILE 'ZCAPLUS' ENTERED AT 11:32:11 ON 27 AUG 2008

L8 8 SEA ABB=ON L7

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FILE 'REGISTRY' ENTERED AT 11:32:42 ON 27 AUG 2008
L9          STR L6
L10         17 SEA SSS SAM L9
L11         STR L9
L12         12 SEA SSS SAM L11

FILE 'ZCAPLUS' ENTERED AT 11:35:26 ON 27 AUG 2008
L13         6 SEA ABB=ON  L10
L14         3 SEA ABB=ON  L12

FILE 'REGISTRY' ENTERED AT 11:35:33 ON 27 AUG 2008
          D QUE L9
L15         564 SEA SSS FUL L9 EXTEND
L16         278 SEA SSS FUL L9
          SAVE TEMP L16 ELH061FULL/A

FILE 'CAPLUS' ENTERED AT 11:36:12 ON 27 AUG 2008
L17         139 SEA ABB=ON  L16

FILE 'REGISTRY' ENTERED AT 11:36:58 ON 27 AUG 2008
L18         1 SEA ABB=ON  42373-04-6
          D SCAN
L19         STR L11
L20         12 SEA SUB=L16 SSS SAM L19
L21         STR L19
L22         11 SEA SUB=L16 SSS SAM L21
          D SCAN
L23         278 SEA SUB=L16 SSS FUL L21 EXTEND
L24         202 SEA SUB=L16 SSS FUL L21
          SAVE TEMP L24 ELH061SUB1/A

FILE 'ZCAPLUS' ENTERED AT 11:47:27 ON 27 AUG 2008
L25         118 SEA ABB=ON  L24
          D PY 118
L26         ANALYZE L25 1- RN HIT :      124 TERMS
          D 1-

FILE 'REGISTRY' ENTERED AT 11:48:53 ON 27 AUG 2008
L27         277 SEA ABB=ON  L16 NOT L18

FILE 'ZCAPLUS' ENTERED AT 11:49:19 ON 27 AUG 2008
L28         69 SEA ABB=ON  L27

FILE 'REGISTRY' ENTERED AT 11:49:32 ON 27 AUG 2008
L29         201 SEA ABB=ON  L24 NOT L18

FILE 'ZCAPLUS' ENTERED AT 11:49:37 ON 27 AUG 2008
L30         48 SEA ABB=ON  L29

FILE 'CAPLUS' ENTERED AT 11:50:09 ON 27 AUG 2008
L31         48 SEA ABB=ON  L29
L32         74 SEA ABB=ON  L18
L33         43 SEA ABB=ON  L32 AND PATENT/DT
L34         31 SEA ABB=ON  L32 NOT L33
L35         0 SEA ABB=ON  L32 AND REVIEW/DT
L36         28 SEA ABB=ON  L34 AND PY<2005
L37         41 SEA ABB=ON  L33 AND (PD<20041126 OR AD<20041126 OR PRD<20041126
          )
L38         69 SEA ABB=ON  (L36 OR L37)

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L39 65 SEA ABB=ON L38 NOT L31
 D SCAN L4
 L40 52378 SEA ABB=ON HAIR/OBI
 L41 8184 SEA ABB=ON KERATIN/OBI
 L42 2 SEA ABB=ON (L40 OR L41) AND L38
 L43 146292 SEA ABB=ON 62/SC, SX
 L44 2 SEA ABB=ON L32(L)COS/RL
 L45 3 SEA ABB=ON L32 AND (L40 OR L41)
 L46 2 SEA ABB=ON L43 AND L32
 L47 136522 SEA ABB=ON DYE#/CW
 L48 46 SEA ABB=ON L47 AND L32
 L49 41 SEA ABB=ON L47 AND L38
 L50 64030 SEA ABB=ON 41/SC, SX
 L51 18 SEA ABB=ON L38 AND L50
 L52 92 SEA ABB=ON (L44 OR L45 OR L46 OR L49 OR L51 OR L31)
 D QUE L24

FILE 'REGISTRY' ENTERED AT 11:57:02 ON 27 AUG 2008
 D STAT QUE L24
 D QUE NOS L29

FILE 'CAPLUS' ENTERED AT 11:57:14 ON 27 AUG 2008

L53 48 SEA ABB=ON L31 OR (L31 AND (L40 OR L41 OR L43 OR L47 OR L50))
 D QUE NOS L53
 D QUE NOS L32
 L54 48 SEA ABB=ON L53 OR (L53 AND L32)
 L55 43 SEA ABB=ON L54 AND PATENT/DT
 L56 0 SEA ABB=ON L54 AND REVIEW/DT
 L57 5 SEA ABB=ON L54 NOT L55
 L58 5 SEA ABB=ON L57 AND PY<2005
 L59 42 SEA ABB=ON L55 AND (PD<20041126 OR AD<20041126 OR PRD<20041126
)
 L60 47 SEA ABB=ON (L58 OR L59)
 D IBIB ABS HITIND HITSTR L60 1-47

FILE 'REGISTRY' ENTERED AT 12:01:12 ON 27 AUG 2008
 D QUE L18
 D IDE L18

FILE 'CAPLUS' ENTERED AT 12:01:26 ON 27 AUG 2008

 D QUE NOS L44
 D QUE NOS L45
 D QUE NOS L46
 D QUE NOS L49
 D QUE NOS L51
 L61 1 SEA ABB=ON L44 NOT L60
 L62 2 SEA ABB=ON L45 NOT L60
 L63 1 SEA ABB=ON L46 NOT L60
 D QUE NOS L44
 D QUE NOS L45
 D QUE NOS L46
 L64 2 SEA ABB=ON (L44 OR L45 OR L46) NOT L60
 D IBIB ABS HITIND 1-2
 D QUE NOS L49
 D QUE NOS L51
 L65 11 SEA ABB=ON (L49 AND L51) NOT (L60 OR L64)
 D IBIB ABS HITIND 1-11

FILE 'HOME' ENTERED AT 12:04:28 ON 27 AUG 2008
 D STAT QUE L24